FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

AUGUST, 1956

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Massed five alarm force, using many master streams, combines threatening Wanamaker blaze—See Page 656

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What is the Best Way to Alert Volunteers?

Fire Completes Demolition of Venerable Wanamaker Building

Swimming is great... but

are you ready

with the most effective artificial respiration known to science?

EMERSON

EMERSON Resuscitators

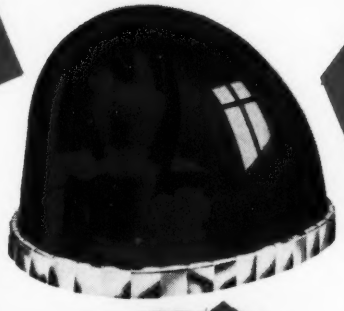
"Simplest and Safest"

J. H. EMERSON CO.

18 COTTAGE PARK AVE., CAMBRIDGE 40, MASS.

One for the money!
here it is . . . the
Fire-Ball

Not a successor to the famous Beacon Raylight but a supplementary signal!



For your special equipment, for any application where your budget won't permit the genuine Beacon Ray. For secondary apparatus, for vehicles pressed into fire service and any place a revolving emergency light can give you that long-wanted protection. Portability, compactness, light-weight, HIGH-INTENSITY . . . low current consumption . . . PRICE!

At a little more than half the price of the Beacon Ray you can now buy the nearest thing to famous Beacon Ray protection! Write TODAY for full information on the FEDERAL FIREBALL!

FEDERAL SIGN and SIGNAL Corporation

8702 S. State St., Chicago 19, Ill.

FIRE ENGINEERING

VOL. 109 AUGUST, 1956 NO. 8

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CTESIBIUS

If you can pronounce it, you can have it!

No matter how you say it, Ctesibius was quite a guy. Three centuries before Christ he invented what historians call a "fire extinguishing machine."

We'll spare you the details, but the fact is that since Ctesibius the technique of fire protection has closely paralleled advances in science and technology.

Today, fire protection has professional status.

For nearly 80 years FIRE ENGINEERING has chronicled the progress in "fire extinguishing machines" and in the development of the science and technology of fire suppression.

We who publish this journal are proud to have played a part in achieving that high professional status.

The end is not yet! Living and working as we are in this chemical cosmos and atomic aura, the like of which even farsighted Ctesibius never dreamed, we find the problems of fire prevention and fire protection piling up almost faster than the most professional of professional fire fighters can hope to cope with them.

If there ever was a time in our 79-year history that FIRE ENGINEERING owed a duty to its large but selective reader and advertiser family, to keep it informed on what's what and who's who, it is now.

It is our hope that we may continue to discharge that duty with credit.

The Publishers

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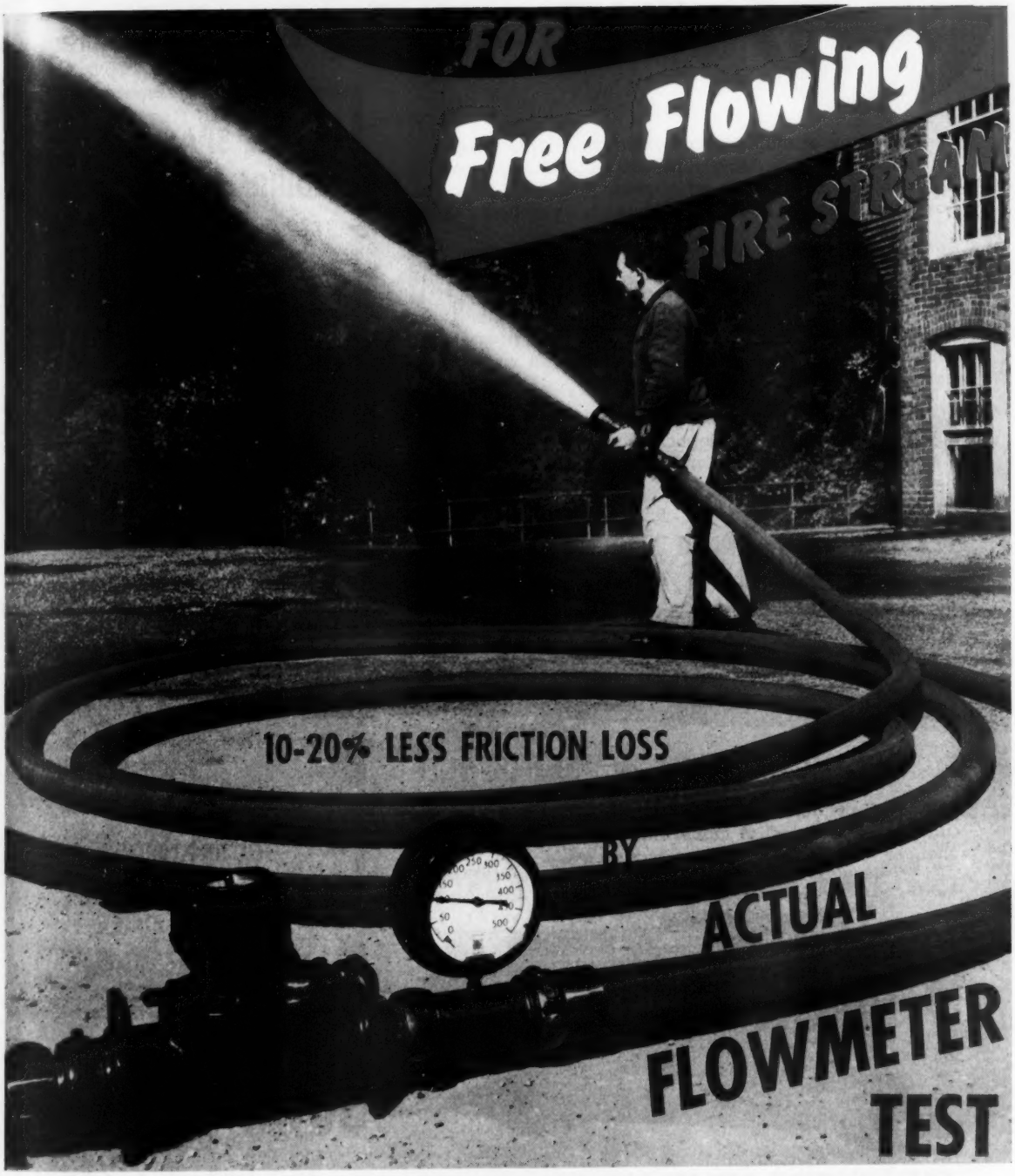


FABRIC FIRE HOSE COMPANY

THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

SANDY HOOK CONNECTICUT

IN CANADA BICKLE-SEAGRAVE, LTD. WOODSTOCK, ONTARIO

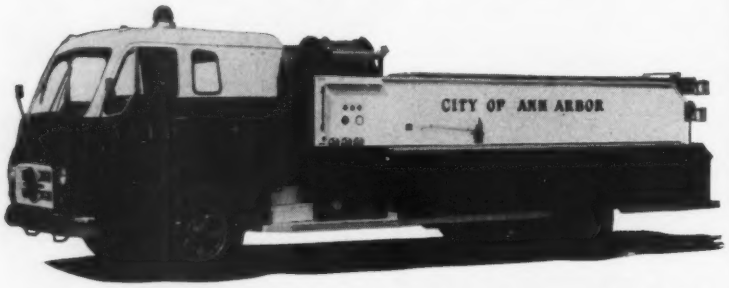
engineered for all-around efficiency

John BEAN multi-purpose High Pressure Fog Fire Fighters

The efficiency of multi-purpose apparatus depends upon a combination of fire-fighting punch and a maximum of easily accessible space for extra equipment. John Bean Multi-purpose High Pressure Fog Fire Fighters give you both.

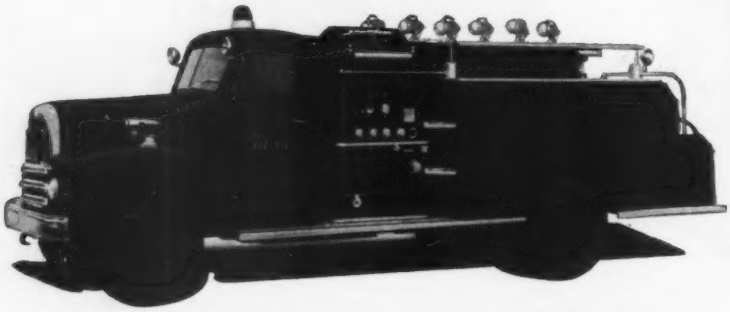
Consider these advantages: (1) Only a small amount of water is needed to make a John Bean fire fighting unit ready for immediate, hard-hitting action. (2) Water converted to high pressure fog is at least ten times more effective than ordinary fire streams. (3) High pressure fog gives you a "triple-threat" fire killing punch — it cools, it smothers, it isolates simultaneously.

The result is a powerful, self-contained fire fighter with a low center of gravity, designed to accommodate all types of accessory tools and emergency equipment.



COMBINATION LADDER AND RESCUE UNIT

Fully equipped for high pressure fog fire fighting with 7-man cab. Carries 186 feet of ladder equipment, plus rescue appliances, two-way radio and salvage covers.



COMBINATION SQUAD AND RESCUE UNIT

This high pressure fog fire-fighter is designed with exceptionally large weatherproof compartments to properly store rescue, salvage and light generating equipment.

Write us details of your requirements today

AMPLE SPACE FOR THE EQUIPMENT YOU NEED

Following are typical types of equipment that John Bean Fire Fighters are engineered to accommodate:

SALVAGE EQUIPMENT

RESCUE EQUIPMENT

FORCEABLE ENTRY TOOLS

REGULAR FIRE DEPARTMENT TOOLS AND APPLIANCES

LADDERS (up to 45 foot lengths)

LIGHT GENERATORS (up to 3500 watt capacity)

FLOOD LIGHTS

TWO-WAY RADIO

WALKIE-TALKIE

ACETYLENE CUTTING TORCHES

PORTABLE POWER SAWS, DRILLS, ETC.

FIRST AID EQUIPMENT

JOHN fmc BEAN®

Lansing 4, Mich. San Jose 1, Calif.

ORIGINAL HIGH PRESSURE FOG FIRE FIGHTER

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION

B.F.Goodrich

New treatment protects hose against mildew and rotting

MOISTURE causes mildew. And mildew quickly ruins unprotected fire hose by causing weak spots that burst under pressure.

Excessive moisture is what they have plenty of at Ocean Beach, New Jersey. A heavy mist rolls in there every night and literally wets down the town. Fire hose doesn't have much chance to dry out.

That's why the Ocean Beach Fire Department was one of the first to buy B. F. Goodrich hose, protected with the exclusive Superseal treatment. And it's paid off. Chief Kenneth Reck, shown at right above, says, "Our Superseal-treated hose has remained in excellent condition."

B. F. Goodrich hose, with Superseal protection, actually has 10 times more resistance to mildew attack and rotting than other treated hose. What's more, this special chemical treatment also protects against moisture absorption and freezing, increases the hose's resistance to fire.

Unlike ordinary treatments that just coat the surface of the hose, Superseal solution penetrates every cord in both the inner and outer jacket, prepares the hose for all sorts of weather.

And most important, the B. F. Goodrich Superseal treatment that brings you extra safety and longer hose life, costs no more than ordinary treatments. Your B. F. Goodrich fire hose distributor can give you more information, or write *B. F. Goodrich Industrial Products Co., Dept. M-732, Akron, 18, O.*

B.F.Goodrich

INDUSTRIAL PRODUCTS

Lightweight uniforms of DACRON and wool stay neater...resist abrasion at points of wear

REG. U. S. PAT. OFF.

All through a busy, strenuous day his lightweight uniform of "Dacron"* polyester fiber and wool keeps its neat appearance. "Dacron" helps uniforms resist wrinkles . . . hold their press—even in wet weather.

Made in comfortable tropical weights, these handsome uniforms have outstanding durability at traditional wear points: elbows, pockets, knees and cuffs. Less need for pressing and easy spot removal help reduce maintenance costs, too. It always pays to ask for "Dacron" and wool in summer uniforms! E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Department, Wilmington 98, Delaware.

DACRON

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DU PONT

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BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

"Dacron" is Du Pont's registered trademark for its polyester fiber. Du Pont makes fibers, does not make the fabric or uniform shown here.

Automatically "breathes" for the victim . . . assures greatest chance of recovery . . .

M-S-A® PNEOLATOR

Successful "saves" with the M-S-A Pneolator are in the rescue records of fire departments all over the country. This instrument has been brought into play in cases of drowning, electric shock, poisonous or suffocating gases and heart attacks. Victims, from 8 months to 80 years, have recovered . . . thanks to the alert action of the firemen . . . the effectiveness of the Pneolator.

This unit intermittently inflates the lungs to a predetermined point, then cuts off to permit exhalation by the natural recoil of the chest and diaphragm. The action is automatic, continuous. When the victim starts breathing, the Pneolator automatically follows the natural breathing pattern. There is no suction cycle.

Pressure is regulated by simple settings that compensate for varying lung capacities. Two facepieces—for adults and children—are standard equipment. The unit is portable, and comes equipped with a half-hour oxygen supply. Write for details.

Note: The first few minutes after breathing has ceased are the most critical. Manual artificial respiration should be started immediately, and continued until Pneolator is in use.

MSA
SAFETY EQUIPMENT HEADQUARTERS

Call the M-S-A man on your every safety problem . . . his job is to help you

MINE SAFETY APPLIANCES CO.
201 North Braddock Avenue, Pittsburgh 8, Pa.
At Your Service: 76 Branch Offices in the United States

MINE SAFETY APPLIANCES CO. OF CANADA, LTD.
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Representatives in Principal Cities in Mexico, Central and South America
Cable Address: "MINSAF" Pittsburgh

In 1908—the CHICAGO FIRE DEPT. —then as now—was up-to-the-minute with Waukesha Engine powered equipment.

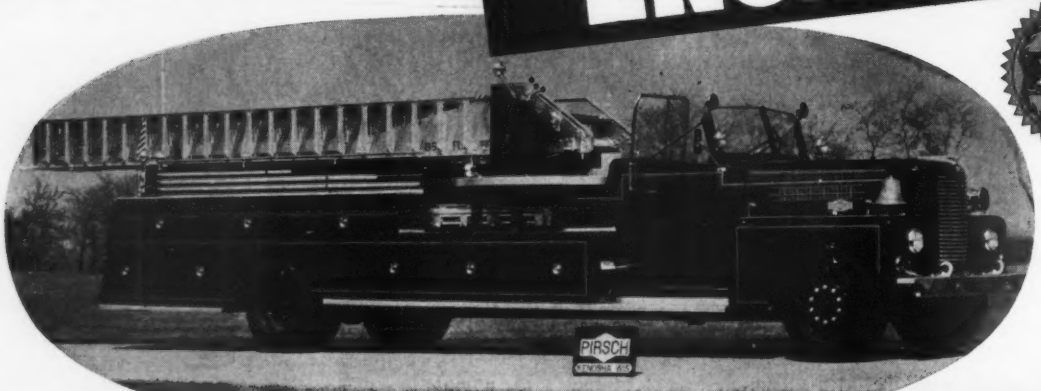
first in FIRE FIGHTING

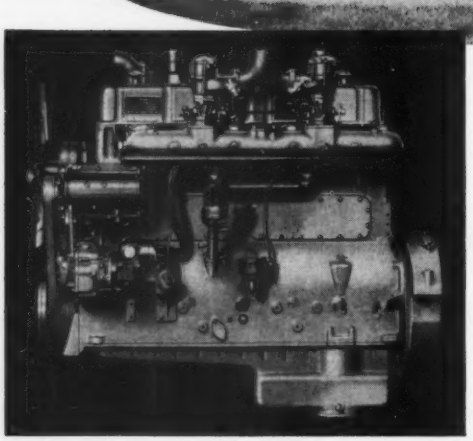
for almost fifty years

...Waukesha Engines—*first* in fire fighting—the preferred power for the finest equipment, because specially built for *faster* fire fighting, they are reliable all the way. *Waukesha Motor Company, Waukesha, Wisconsin, New York, Tulsa, Los Angeles.*

WAUKESHA FIRE FIGHTER ENGINES

50th ANNIVERSARY Waukesha 1906-1956





WAUKESHA FIRE FIGHTER ENGINES

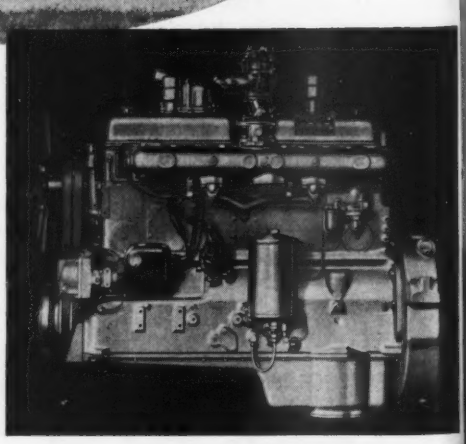
Counterbalanced or Non-Counterbalanced

Typical 145 Series 779 or 817 cu. in., up to 275 hp.

Typical 140 Series 525 or 554 cu. in., up to 226 hp.

Send for Bulletins

321



Announcing a COMPLETE line of

Hydraulic Rescue Equipment

When seconds are critical . . . BLACKHAWK

Porto-Power helps you save lives, protect property

These time-proven hydraulic power tools spread, bend, push, press, lift and pull to instantly force entry . . . free trapped victims

AT last there exists a full line of *hydraulic power tools* specifically selected and tested for all types of emergency rescue work!

This timely development can be credited to the many fire chiefs, sheriffs and other public and industrial safety experts who have proved the sensational efficiency of Blackhawk hydraulic "Porto-Power" for rescue purposes. Through the years, these men had been inspired to adapt "Porto-Power" to emergency rescue work because they had witnessed the miracle of power and flexibility performed by this equipment in other applications. Their urging and assistance have now led to the following:

Six "Rescue Kits" have been scientifically developed — in 4, 10 and 20-ton "power packages" — complete with "Porto-Power" remotely controlled hydraulic jacks and versatile attachments.

WHY IS THIS IMPORTANT? Think back to fires and accidents in your experiences . . . recall when victims were hopelessly trapped in wrecked vehicles or under debris. Think how rescuers struggled with hacksaws, prybars, torches, etc., sometimes losing the race against fire and death! Think how this modern, *fast* "Porto-Power" rescue equipment could have done the job in swift seconds instead of in agonizing long minutes or hours. Act today — learn how "Porto-Power" can help in your important role of protecting lives and property.

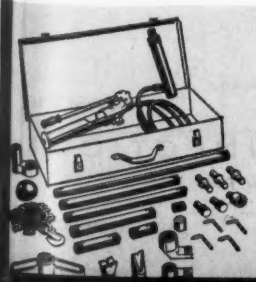
FOR A DEMONSTRATION — call your nearest Blackhawk representative. He's your local automotive, industrial or fire equipment distributor. Blackhawk Rescue Manual HR300 has been mailed to every fire chief. If you haven't received your personal copy, write us.

BLACKHAWK

Worlds largest manufacturer of HYDRAULIC TOOLS

BLACKHAWK MFG. CO., Dept. HR • Milwaukee 46, Wisconsin

"Porto-Power" kits contain remotely-controlled hydraulic jack, spreaders and attachments.



Easy to set up, use! "Porto-Power" assembles in seconds. Hundreds of combinations.

Light, easy to carry. Take "Porto-Power" anywhere. Self-powered. Develops tons of force.

Works near gasoline and fumes. Eliminates sledging, etc.; minimizes spark hazard.

"HE'S JUST STUBBORN, HE'S TRYING TO OUTLAST THAT HEWITT-ROBINS 'DACRON† ' FILLER, THE LIGHTWEIGHT, EASY HANDLING HOSE!"

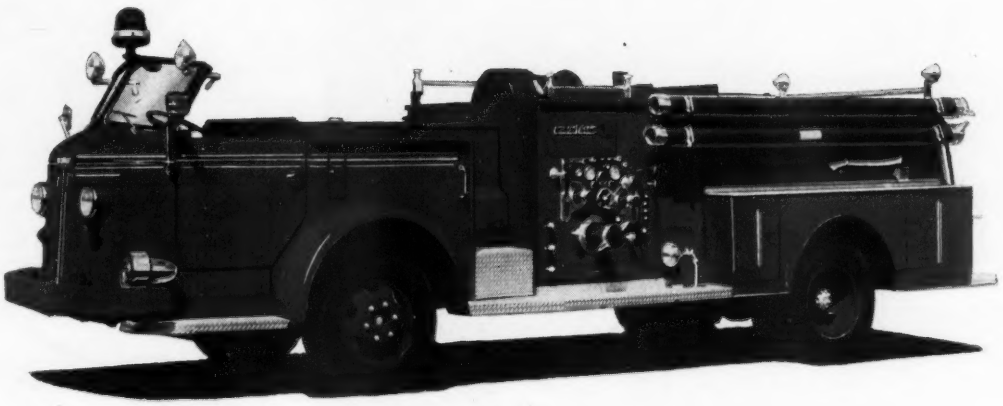
Hewitt-Robins manufactures all types of Municipal and Industrial Fire Hose.

†Du Pont T. M.

HR **HEWITT-ROBINS** • STAMFORD, CONNECTICUT

Hewitt Rubber Division, 240 Kensington Avenue, Buffalo 5, New York

The *New* AMERICAN LAFRANCE Custom Built Pumpers . . .



FOR OUTSTANDING

• UTILITY •

- Cab-Ahead-of-Engine for maximum visibility and safety.
- 5-man seating with adjustable driver's seat.
- 9 Equipment storage compartments with 7 of enclosed type. Here is more equipment storage utility for both protected and open mounting, and a maximum of accessibility, too!
- 73 inch wide hose body. Will carry 2100 feet of 2½ inch d.j.c.r.l. hose with 300 gallon water tank. 1700 feet d.j.c.r.l. hose with 500 gallon water tank.
- All water tanks with large fill opening (8" by 8") and deep outlet sump to permit using all of tank capacity.

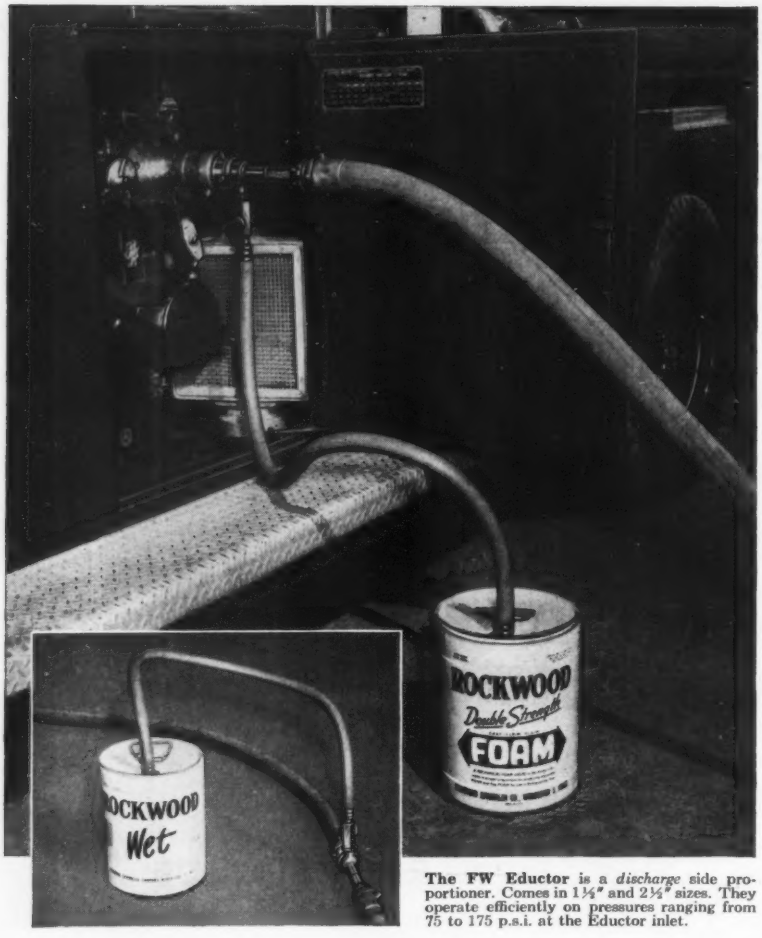
• PERFORMANCE •

- 7 Modern power packed engines (five, 6 cylinder and two V-12) to meet your performance needs. The brake horsepower range is 175, 205, 215 (V-12), 250, 275 (a 6 cylinder or V-12), and 305.
- Short turning radius with easy steering for narrow streets.
- Smooth safe riding on the roughest streets with new longer springs and direct acting shock absorbers at both front and rear axles.
- New TWINFLOW pump, parallel-series 2-stage centrifugal. All Class A ratings, with pressures up to 600 p.s.i. when specified.
- Power operated (vacuum) hydraulic brakes.

• Ask our representative for more information about all the important features of these new Custom Built fire engines.

AMERICAN LAFRANCE CORPORATION
ELMIRA, NEW YORK, U. S. A.

LAFRANCE FIRE ENGINE—FOAMITE LIMITED
TORONTO, 9, ONTARIO, CANADA



The FW Eductor is a *discharge* side proportioner. Comes in 1¼" and 2½" sizes. They operate efficiently on pressures ranging from 75 to 175 p.s.i. at the Eductor inlet.

Two for the road!

Protect against flammable liquid fire due to tank truck accidents

With more traffic on congested highways, more filling stations, more and more gasoline tank trucks in daily service, *your* municipality is in greater danger of a flammable fuel fire than it has ever been before. A sudden crash of a tank truck passing through your city streets tomorrow could confront you with a difficult-to-control flammable liquid fire.

The use of Rockwood FW Eductor reduces the danger of disastrous losses due to such a fast-spreading fire. Developed for operation with Rockwood's FFF nozzle and SG-60 nozzle with FF extension unit, the FW Eductor introduces Rockwood regular 6% FOAM liquid, Double-Strength 3% FOAM liquid or WET (1% or 2%) into the hose line, quickly controlling and extinguishing flammable liquid and other fires.

Rockwood FW Eductor is the simplest form of proportioning you can buy. Ideal for municipal fire departments, oil refineries and industrial plants, it can be attached between discharge gate of a fire truck and hose line, or between hydrant and hose line, or between two lengths of hose.

Be prepared. Put this great fire fighter to work for you. Specify Rockwood FW Eductor when you order a fire truck.

ROCKWOOD

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

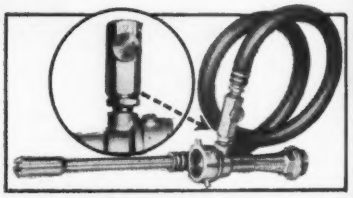
PORTABLE FIRE PROTECTION DIVISION · 1543 Harlow Street, Worcester, Mass.

DISTRIBUTORS IN ALL PRINCIPAL CITIES

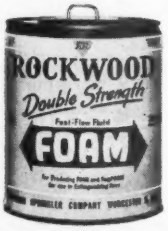
FFF Nozzle comes with Foam screen and solid Foam stream shaper.

SG-60 Nozzle with FF extension unit.

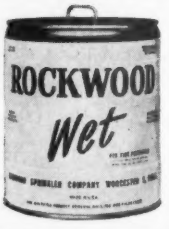
Rockwood Eductors are designed for use with both the Rockwood FFF nozzle and the SG-60 nozzle with FF extension unit. SG-60 is an all-purpose nozzle that fights fires 5 ways — high velocity WaterFOG, low velocity WaterFOG (with applicator), FogFOAM, solid stream of water or of FOAM, FF extension unit discharges Rockwood FOAM in a solid stream or as FogFOAM, and covers large areas at one time.



The Variable FW Metering-Check Valve on the Rockwood Eductor is highly versatile, and is furnished with each FW Eductor. It incorporates both the Metering Valve and Ball Check Valve in one unit, and meters liquid into the hose line in any proportion from 1% through 6%.



Rockwood Double-Strength Foam Liquid, 3 parts mixed with 97 parts water, forms a solid FOAM blanket that quickly re-seals itself. Available in 5-gallon or 50-gallon drums.



Rockwood WET, 1 part mixed with 99 parts water, increases penetration, and extinguishing action of water. Excellent for deep seated fires or where water is scarce. Can be used in proportions of 1% or 2% by volume for Class A and B fires. Available in 5-gallon cans or 50-gallon drums.

Triumph over Channel Chatter

THE NEW DIMENSION IN 2-WAY RADIO COMMUNICATION

Truly a new concept in two-way radio communications—the result of years of extensive engineering and "on-the-job" field testing. Now you can "get off the party line". No longer is it necessary to listen to a constant stream of "channel chatter". PRIVATE-LINE radiophone is *completely quiet* except when receiving a call from another PRIVATE-LINE radiophone in the same operation.

- **reduces missed and misunderstood messages**—operators hear only messages within their own operation.
- **increases overall efficiency**—fewer errors mean more productive utilization of time—fewer repeat messages—more dispatched vehicles per hour . . . real advantages during peak load periods.
- **increases area coverage**—"coded squelch" circuit automatically maintains optimum receiver sensitivity, assuring maximum communications range at all times.
- **easier to operate**—no additional buttons, lights, adjustments or operational techniques—elimination of squelch adjustments makes it even simpler to operate than conventional two-way radio.
- **reduces operator fatigue**—elimination of "channel chatter" enables operators to concentrate on their jobs—reduces tension, providing a more pleasant atmosphere—increases job satisfaction.
- **selective**—This amazing new circuit opens the speaker only when receiving a properly coded transmission from a PRIVATE-LINE radiophone in the same operation. NUISANCE NOISE, MESSAGES FROM NEARBY SYSTEMS ON THE SAME CHANNEL, AND SKIP INTERFERENCE FROM DISTANT SYSTEMS *CANNOT* UNLOCK THE SPEAKER.
- **automatic**—does not require manual adjustment—electronically maintains feather edge sensitivity at all times.
- **silent**—coded subcarrier is inaudible—normal carrier-off noise burst or "squelch tail" is eliminated from the output of mobile receivers.
- **built-in**—tone circuitry is incorporated as an integral part of compact transmitter and receiver chassis.
- **precise**—Motorola's exclusive VIBRASENDER and VIBRASPONDER electromechanical resonant tone devices assure precision stability, selectivity, and reliability.

Technical men will be quick to note that PRIVATE-LINE radio does not employ a conventional tone-pulse selective calling system, but, instead, a continuous inaudible tone-coded subcarrier system which opens the speaker only for calls from transmitters in the system. Interfering signals cannot "trip-open" or "lock-in" the speaker, since only the properly tone-coded carrier keeps speaker open.

MOTOROLA
2-Way Radio

Private-Line

MOTOROLA Communications & Electronics, Inc.
4501 Augusta Boulevard Chicago 51, Illinois

Send coupon now for illustrated brochure.

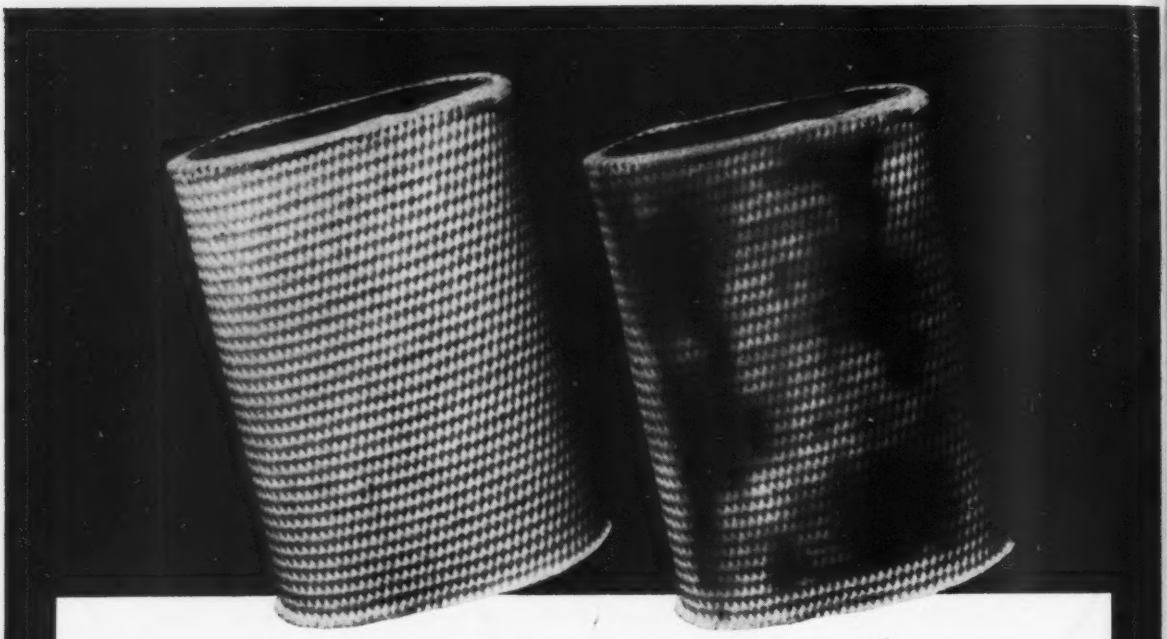
FE

Name_____ Title

Organization _____

Address_____

City_____ Zone____ State_____



WHAT MAKES THE DIFFERENCE IN THESE TWO?

Provar treatment! That's the difference.

Saturated with water, both samples were exposed to moist atmosphere, under conditions favorable to growth of mildew . . . *for six months, day and night.* The unretouched photos dramatize the effectiveness of the treatment.

Provar is an exclusive process developed by Republic Rubber for prevention of mildew and rot on Fire Hose. The six-month test confirmed the many, many service records that Provar treatment will not wash out or lose its effectiveness.

Illustrated below—the four fine grades of Municipal Fire Hose made by Republic Rubber. All are supplied with Provar protection against mildew and rot.

GOOD FIRE HOSE BY REPUBLIC RUBBER

CHAMPION—Dacron filler, test pressure of 600 lbs. Best grade Fire Hose made.

TOWER — Dacron filler, test pressure of 400 lbs.

CHARIOT — Cotton yarn, test pressure of 400 lbs.

TARGET—Cotton yarn, made to meet demand for heavy-duty hose at moderate cost.

REPUBLIC RUBBER DIVISION

LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN 1, OHIO

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New 1000-A SERIES

DUO Safety

ALUMINUM FIRE LADDER

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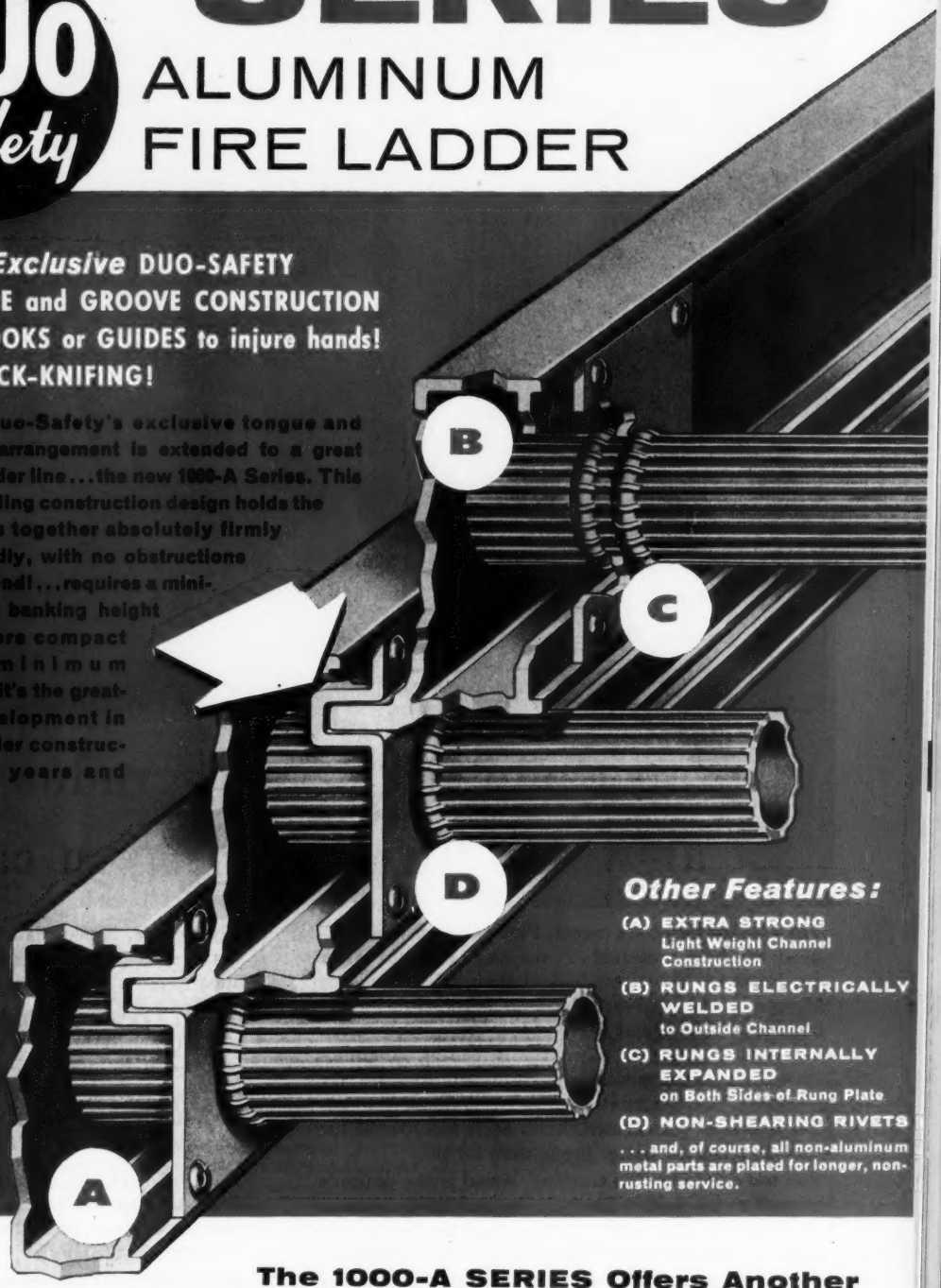
- **NO HOOKS or GUIDES to injure hands!**
- **NO JACK-KNIFING!**

Now, Duo-Safety's exclusive tongue and groove arrangement is extended to a great new ladder line... the new 1000-A Series. This outstanding construction design holds the sections together absolutely firmly and rigidly, with no obstructions of any kind!... requires a minimum of banking height ...is more compact with minimum weight. It's the greatest development in fire ladder construction in years and years!



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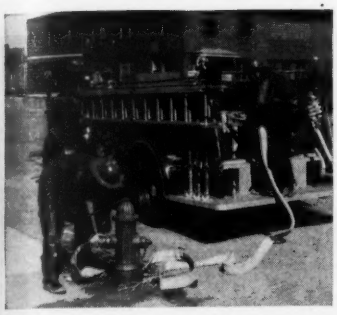

OMAHA, NEB. "We've found the advantages of hose made with 'Dacron' are many—from quick drying to mildew resistance."

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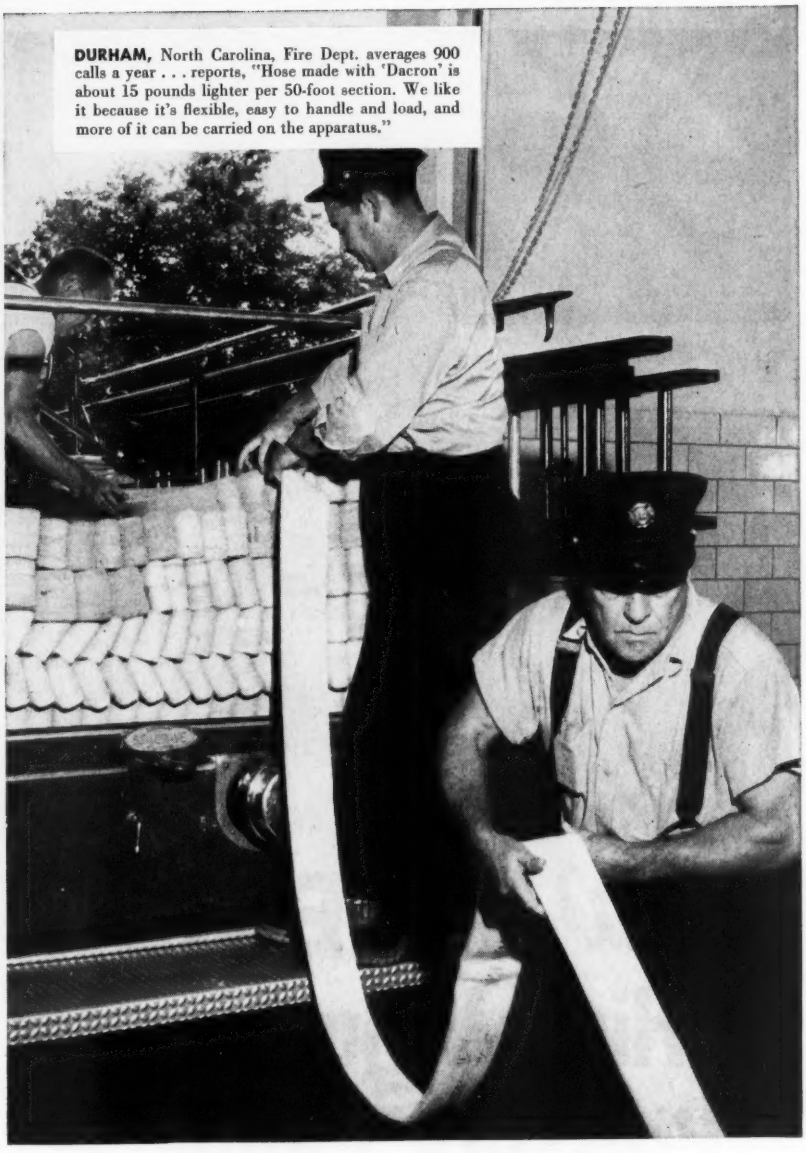

DURHAM, North Carolina, Fire Dept. averages 900 calls a year . . . reports, "Hose made with 'Dacron' is about 15 pounds lighter per 50-foot section. We like it because it's flexible, easy to handle and load, and more of it can be carried on the apparatus."

Durham Fire Dept. reports:

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Lightweight, flexible and extra-strong, hose made with "Dacron"* polyester fiber helps the Durham Fire Department maintain top efficiency. Chief C. L. Cox reports that 25% more hose made with "Dacron" can be carried on each truck. Like fire chiefs across the country, Chief Cox reports better all-round performance from fire hose made with "Dacron". Used as the load-carrying "filler" cord that reinforces the hose, this Du Pont fiber permits a hose that's light and flexible—yet *stronger* than ordinary hose of the same construction.

Du Pont makes "Dacron" and supplies the yarn to hose manufacturers. The combination of the unusual properties of "Dacron" plus hose manufacturers' skill has resulted in a superior fire hose. Hose made with "Dacron" is made by all leading fire-hose manufacturers. The next time *you* buy hose, be sure it's made with "Dacron". E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

*"*Dacron*" *is Du Pont's registered trademark for its polyester fiber.*

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For Better All-Around Performance Specify Hose Made with "Dacron"

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70	55
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Automatic Priming: 5 feet in 15 seconds; 15 feet in 25 seconds
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Study the excellence of every feature, every detail of this gun. Compare it to any other—and you'll see why users call it a "most valued accessory" on every American Fire Truck.

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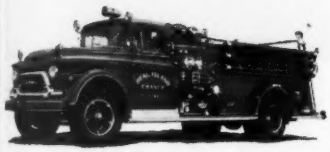

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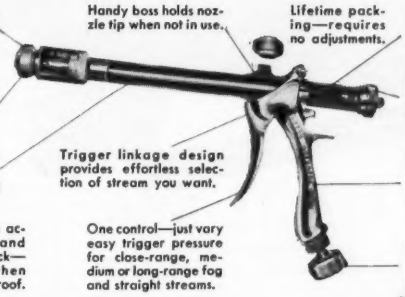

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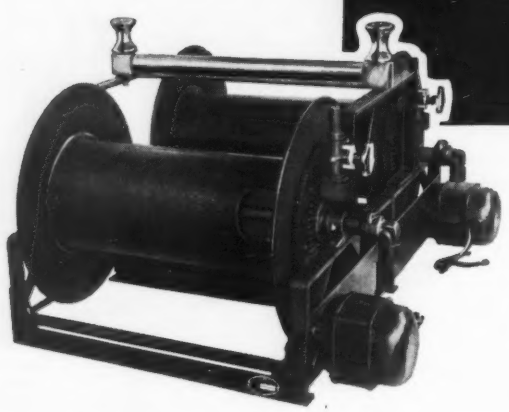

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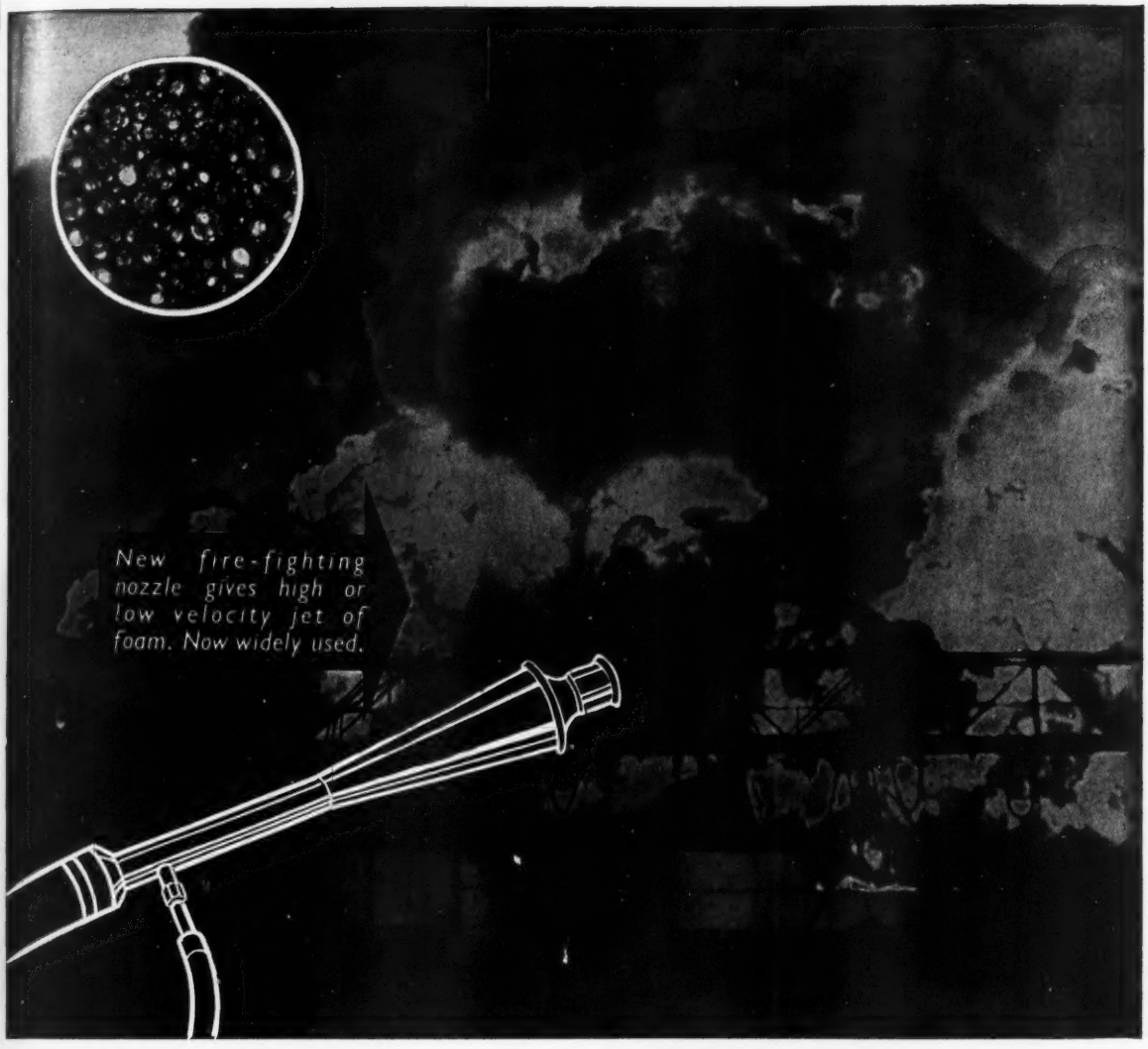

Photomicrograph Mag. X30 shows close-knit bubble blanket of foam.

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Nicerol

foam—
AND IT STAYS DEAD

Nicerol, with pH 6.8 to 7.3, does not corrode drums or valuable equipment. It does not form sludge. 3 gallons of Nicerol NLXX (3%) Foam Liquid with 100 gallons of water, fresh or salt, forms 1,000 gallons of close-knit foam (see photomicrograph above). A Nicerol test can cost you nothing this way:— Write the one word SAMPLE on your official stationery and we will send you, freight pre-paid anywhere in the U.S.A. or Canada, a 5-gallon can of Nicerol NLXX (3%) for $20 C.O.D. (or enclose draft). The $20 cost of this sample will be deducted from your first 100 gallon or larger order for Nicerol.

A dense blanket of adhesive, cohesive foam which actually follows the fire—stifles it, outlasts it and prevents flashback—that's Nicerol, most widely used foam compound in the world.

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In recent years these 240 cities and towns have cast their votes for Municipally owned and controlled fire alarm systems. They have installed brand new coded telegraph systems or made substantial replacement of existing ones. In addition, 1800 other cities and towns are safely protected by coded systems with similar features.

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FIRE ENGINEERING

VOL. 109, NO. 8 AUGUST, 1956

SMALL TOWNS—BIG PROBLEMS

The volunteer fire forces of the nation face many problems today. One of the worst is that of keeping pace with the growth in fire hazards and the increasing need for better fire protection in their districts.

Not only are the demands upon the volunteer departments for meeting fire and other emergencies increasing, but so are costs to maintain and operate these fire forces. At the same time also, problems of keeping the organizations at a high level of efficiency, with the facilities at hand, are multiplying.

An alarming aspect of the situation is that posed by the movements of people, business and industry out of some large centers into the suburbs and even what were formerly called rural areas.

Surrounding nearly every progressive city of any size today are costly real estate, mercantile and industrial developments which present problems of fire prevention and control never anticipated by those who founded the original fire departments—if such existed at all—in the area.

With the movement countryward of industrial establishments, whether to escape city taxes, to decentralize in anticipation of enemy attack, or to improve living and working conditions—the reasons do not matter—there have been corresponding shifts in population and buying power. With this has come natural expansion in related business developments, housing additions, supermarkets, shopping centers, out-of-door theatres, sports arenas and whathaveyou, with consequent impact upon the fire protection forces.

Travel the thruways and turnpikes over the nation and you get a good idea of this situation. Note the factories dotting the landscape, many well removed from any communities that support fire departments.

Outwardly, some of these plants appear firesafe but many of these house materials and employ manufacturing processes ripe for destructive fire far beyond the protective resources either of the plants in question or of the neighborhood fire forces.

Many of these factories, shopping centers and other risks have no private fire protection. The factories lack their own fire brigades or squads. Fire fighting facilities are limited to only meager first aid fire appliances. And as for sprinklers, fire detection and supervisory alarm systems, they are conspicuous by their absence.

In the last few years, over half of the nation's large loss fires have occurred outside political sub-divisions having full paid fire departments and were fought by volunteers. These volunteer departments cannot be blamed for all this heavy loss. In too many cases, the cards and the hazards were stacked against them before the fire eventuated. In others, the departments were poorly manned and equipped for the task.

It must be remembered that whereas industry and business of all kinds have been decentralized, the fire service has not been spreading out to keep pace.

No one questions the value of well organized and equipped volunteer fire forces. But one can question a situation that places upon their shoulders a responsibility and burden which because of failure to receive support from either community, district, state government, or private interests they are expected to protect, they are not geared to meet.

Under the conditions stated, indications are that unless something drastic is done about it, conflagrations and large loss fires in these categories are going to continue—perhaps to mount.

Roi B. Woolley

Editor

One of the first county-wide fire reporting systems in the country was installed in Prince Georges County, Md. Alarms are reported to either of two central offices and the proper department is dispatched by radio. The Hyattsville central alarm station is shown in the photograph —*Maryland State Firemen's Assn. Photo*

What Is the Best Way To Alert Volunteers . . .

Public or Selective Notification? Wired or Wireless? What Systems Offer Greatest Promise?

By DONALD M. O'BRIEN

EVER SINCE THE BIRTH of the volunteer fire service, the vexing problem has been how to notify members of a fire department of the location of a fire or other emergency after an alarm has been received, and to do it without disagreeable repercussions.

From the days of the "Rattle Watch" to the present electronic period, there have been numerous ideas and devices tried out to alert the volunteer at home, or afield, wherever he might be, and to speed him into action.

From clarion call to rattle; to church bell and fire bell; from bell to steam whistle, locomotive tire-iron and rail; from hand-cranked Klaxon to electric siren; to air whistle, horn and diaphone, one after another audible signal has appeared and been tried and adopted in some measure by the volunteers.

Although each possessed certain qualities to awaken the fireman, each had the universal drawback: It not only notified the fireman about the fire—it told the whole town about it. And nearly everybody knows what happens in the community when the public fire alarm goes off!

Although telegraph fire alarm boxes, such as they were, preceded the telephone as a means of transmitting alarms of fire, it was the latter which offered the first hope of silently alerting the vamps, after the alarm had been received by the department.

Some alerting problems

Many consider the number one problem of alerting the volunteers to be that of getting them into action with least possible delay, without letting the whole area in on the incident.

Efforts to foil the apparatus chasers and sidewalk chiefs (they are found in the small communities as well as the big cities) by silencing the public alarm, and calling the volunteers *en masse* or selectively by telephone, have met with only partial success. Nor has the coming of the dial system and elimination of many small town local exchanges helped the situation.

Many expediencies have been tried in the effort to solve the problem. In 1929 and again in 1941, FIRE ENGINEERING published in its round tables the experiences and opinions of representative fire chiefs in dealing with this question.

There was—and doubtless still is—some conflict of opinion on the best method of alerting the volunteers, with minimum displeasure to the townfolk and the least delay in the alerting.

A number of volunteer departments withhold sounding any audible public signals until their fire apparatus has left its station and is well on its way. At least this gives firemen a bit of head start on the chasers.

Other departments attempt to circumvent the curious by utilizing a code which may be changed whenever too many of the local people get wise to it. Still others freely publicize their real or imaginary box numbers on the theory that by educating their citizens in the behavior they should adopt when the signal sounds and the fire rigs roll, there will be more cooperation between the department and the public.

But there were—and still are—more problems connected with notifying volunteer firemen besides those of audible and/or silent alarm. There is the primary one, particularly in the smaller towns, of who is going to do whatever signaling is necessary to accomplish the alerting.

The great majority of volunteer fire departments are of necessity dependent on the telephone for the reports of fire. In

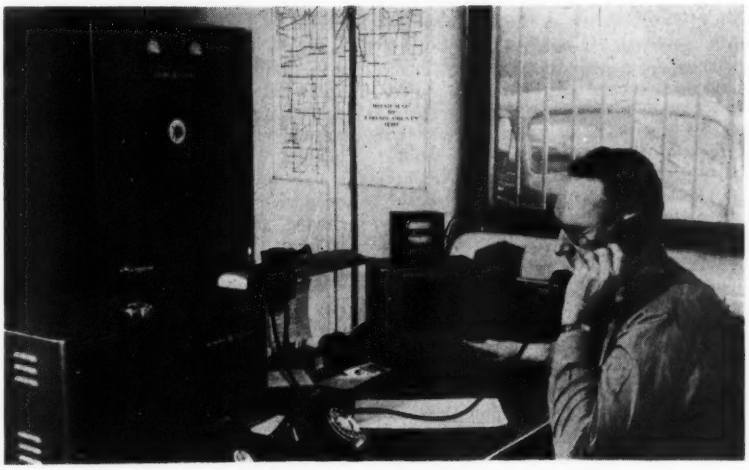
The Lancaster, N. Y., Fire Control Center is operated by the police who can alert any department in the town by means of radio-controlled public alarms. This installation is one of ten in the extensive Erie County, N. Y., mutual aid system —*Courtesy Motorola Inc.*

some areas served by a local manual exchange, the telephone operator may also act in the capacity of dispatcher. She may actuate a public alarm signal upon receipt of an emergency call. In some cases a coded air horn transmitter may be located in the telephone office and the operator notifies the firemen by operating the mechanism.

Many telephone companies have resisted this type of service in the past fearing that they were assuming responsibilities beyond that required in their charters. It was felt that if a mistake or other mishap to an alarm occurred they would be open to suits for damages, even though the service was rendered on a voluntary basis in the interest of community welfare. The advent of the automatic exchange and the resulting removal of the operator from the scene has brought relief to telephone company executives, even if it has increased the headaches to the volunteer fire service.

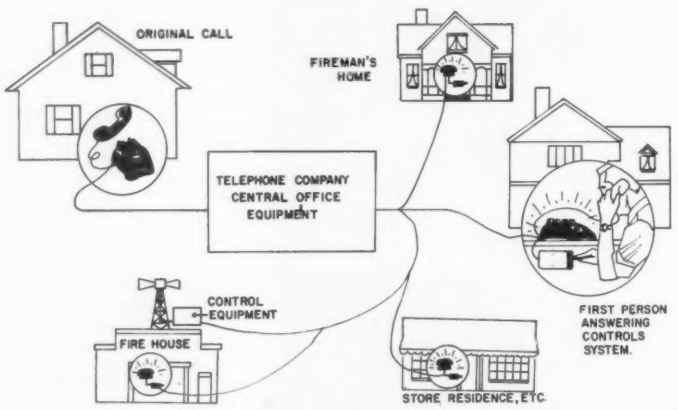
Round-the-clock alarm reception solutions

With the disappearance of the local telephone operator, the fire service was forced to find substitutes for what had been an excellent 24-hour reporting center. In order to maintain insurance recognition of the services of the fire department, it is necessary to have some means of receiving alarms on a full-time basis. All fire insurance rating or inspection bureaus in the nation are concerned with the fire alarm service. In general they require that before recognition in the form of lowered insurance rates is applicable, the local fire department must be capable of receiving alarms on a 24-hour basis. A central reporting point is preferred but the inability of some communities to meet this requirement can be waived if a reasonable substitute is made. The instructions of one rating bureau to their inspecting engineers states, "Preferably we would like to see a private line specifi-



The Oberlin, Ohio, Police Department operates the alarm headquarters for the local volunteer fire department. Alarms are transmitted by the patrolman on watch and received by the firemen on monitor receivers installed in their homes. Most fire chiefs report faster response to alarms when such home alerting units are used —*Courtesy General Electric Co.*

A fan-out system is used by some departments. Monitor receivers are placed in the homes of selected firemen for alerting in case of fire. Upon receipt of an alarm over the radio the fireman or a member of his family will call one additional man by telephone. This method tends to increase response to fires —*Courtesy Allen B. Du Mont Laboratories, Inc.*



Simplified layout of the emergency reporting system supplied by the Bell Telephone Companies. Over 500 of these installations are now in operation and excellent results have been reported. It features a special conference circuit and an associated remote control signaling circuit—*Courtesy A. T. & T. Co.*

cally reserved for *fire calls only* at a point where there is guaranteed 24-hour service. At such a telephone there should be a switch for sounding the public alarm. If such location is at a distance from the firehouse, then there preferably should be a private reserved phone at the fire station so that the person sounding the alarm can call the fire station and advise the responding firemen of the location of the fire. In the absence of such an arrangement with a reserved phone and constant attendance, we would accept three non-reserved phones at places where there may not be 24-hour attendance. There must be some sort of guarantee that someone will be located near at least one of these phones at all times."

This same bureau requires that every community that does not have a public street alarm box system must provide a lighted switch or button on the firehouse indicated by a red lamp or otherwise marked *fire alarm* so that motorists traveling through the community at night may sound an alarm. It is evident from the above that any department contemplating changes in their alarm system should consult with their rating or inspection bureau.

Faced with the problem and the consequences if a solution were not forthcoming, the volunteer fire service came up with a variety of workable answers. In areas where money was not a major drawback, a paid dispatcher or houseman was hired for the sole purpose of receiving alarms and turning out the local department. This system is the most successful where the means are available. Closely approaching the ideal are those communities that have the services of a police force on 24-hour duty. All fire calls are directed to the desk man and he in turn acts as dispatcher for the fire department.

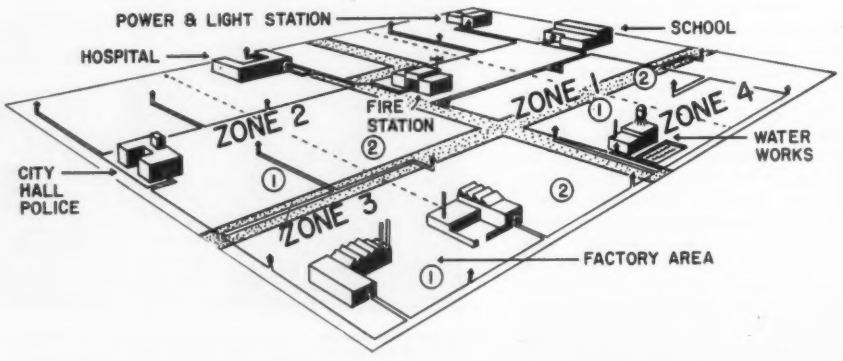
In some communities the local water department pumping station has been utilized, but here again, progress is intervening and many pumping stations are becoming completely automatic in operation and no longer maintain men on duty around the clock.

Factories and mills having guard forces on 24-hour watch have also been pressed into service. In many cases the public alarm is also sounded by the same factory through a steam whistle. Much credit is due the manufacturer whose sense of community responsibility continues without fail in providing this service, even though he knows full well that with every alarm of fire he will lose the services of a portion of his operating force. Invariably the greater proportion of active volunteers will work for the firm that provides the alarm service.

Public alarm devices

The powerful electric siren is the most popular device for alerting volunteer firemen in most communities. Available in a variety of sizes to fit the requirements of the area to be covered, they can be automatically controlled to go through a cycle of output as determined by the local conditions. Where a single siren will not adequately cover the desired area due to land configurations, smaller units can be strategically located to fill the dead spots, and eliminate noise interference or other obstacles. Special relays adapt the siren to remote control either by fire alarm, leased line or radio triggering. Some communities desire more than just a general alarm and codes for designating locations or areas are then necessary. Sirens can be coded to blow a series of blasts or warbling notes, but due to the nature of a siren the codes must be very simple and limited in number.

Where a large number of codes are necessary such as a street alarm box system, the use of the air horn or whistle type of public alarm is popular. Operated by compressed air, the horn or whistle is actuated by a special mechanism that will follow the impulses of a street box and sound the number of the box in the same manner that a house gong strikes the blows. The raucous bellow of the air horn is a common sound in many communities and has proven its worth in long hard service.



Typical zoned community for simple codes. Pulling a street box directs the firemen to the general area saving the time lost in reporting directly to the fire station —*Courtesy* SAFA *Div., The Fyr-Fyter Co.*

Objections to the public alarm

From time to time the residents of some communities have objected to the sounding of a public alarm for fire. While some of the complaints have been of a shortsighted or selfish nature, they have been the cause of concern to many chiefs.

A difficulty from the point of view of the fire service has been the increasing noise level in most communities. During certain periods of the day it has become impossible to guarantee that all firemen could hear the public alarm due to the ambient noise level and as a result response to alarms suffers because many of the men are unaware of an alarm.

Telephone conference circuit

In an attempt to alleviate the difficulties caused by wholesale changeovers to the dial system, the various telephone companies supply what is known as the emergency reporting system. There are several variations possible but the basic system consists of a special conference circuit containing a maximum of six telephones. Any person dialing the fire department reporting number is connected to this conference circuit. The phones on the answering end of the circuit are distributed in strategic locations picked to assure that at least one phone will be covered at all times. The first person answering the alarm phone can cut off the microphones of all the other phones and prevent anyone else from talking and creating confusion. However, all persons on the conference circuit can listen in to the conversation. When the location is determined the public alarm can be sounded from any of the locations by means of a switch installed near the alarm phone.

In addition, if conversation is necessary on the conference circuit, the first answering person can restore the microphone circuit by merely operating a simple switch attached to the phone cradle. Then all can talk and listen on circuit.

In addition to the above, some telephone companies have experimented with a conference circuit designed to alert a large number of firemen without sounding a public alarm. At the present time this is said to be available in the New England states and in some western states.

Radio signaling pressed into service

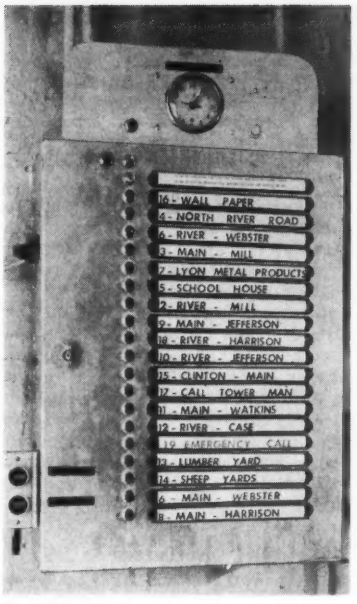
Radio is popular in many sections of the country. There are installations in several communities for the sole purpose of alerting the firemen which have generally proved successful. In one case the services of a county mutual aid radio net are used to advantage to overcome a difficulty of alarm reporting in a fire district served by two separate automatic switching centrals and a local private telephone company.

All fire calls for the district are routed to a municipal paid fire department alarm office nearly 15 miles away. The paid department operates the county mutual aid center which is equipped with selective signaling equipment for alerting any of the score or more volunteer departments in the county.

When the paid dispatcher receives a call for the fire district he checks the location and then actuates the siren of the fire district department by radio signal. The first fireman to reach the volunteer fire station is then given instructions by radio as to the location of the fire. It is considered good practice for the dispatcher to follow up the radio signal with a telephone call to the chief of the district department as a check on the receipt of the alarm.

Montgomery, Ill., reports on operations

The June, 1951, issue of FIRE ENGINEERING described an alerting system designed by the Montgomery, Ill., Fire Department. Basically this is a box alarm system using an annunciator as a visible indicator of the location and a siren as a public alarm. Watch service is provided by a local railroad signal tower where an operator is on duty 24 hours a day. The railroad tower operator has an alarm telephone and the code transmitter, adapted from a dial telephone, on the wall of the signal tower operating room. An extension telephone from the fire station permits the tower operator to talk directly with the firemen when necessary.


16 - WALL PAPER
4 - NORTH RIVER ROAD
6 - RIVER - WEBSTER
3 - MAIN - MILL
7 - LYON METAL PRODUCTS
5 - SCHOOL HOUSE
2 - RIVER - MILL
9 - MAIN - JEFFERSON
18 - RIVER - HARRISON
10 - RIVER - JEFFERSON
15 - CLINTON - MAIN
17 - CALL TOWER MAN
11 - MAIN - WATKINS
12 - RIVER - CASE
19 EMERGENCY CALL
13 - LUMBER YARD
14 - SHEEP YARDS
1 - MAIN - WEBSTER
8 - MAIN - HARRISON

Visual alarm annunciator on wall of Montgomery, Ill., fire station. Firemen can tell at a glance the location of a call by a light opposite the box station

When an alarm is received from a local box or by telephone, the siren is sounded and the location of the alarm is visibly displayed on the annunciator in the fire station for nine minutes. This allows firemen who missed the apparatus to report to the fire without further delay. Recently, Mr. C. M. Gaylord of the Montgomery Fire Protection District told FIRE ENGINEERING:

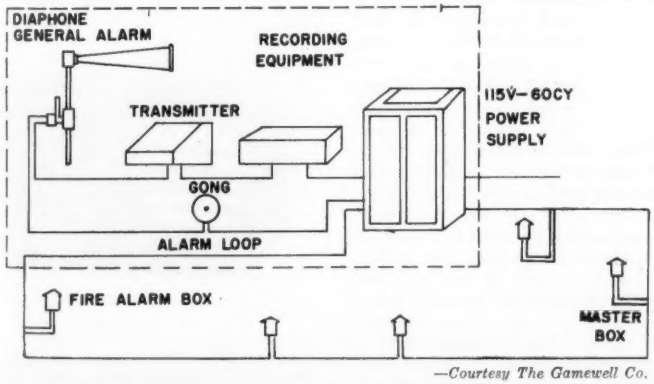
"In 1949 we installed an alarm system of our own design. This machine has given us the best of service. From time to time we have made additions in the form of automatic alarm boxes in our factories and schools. In fact, on a recent alarm at one of our factories they were not aware they had a fire until we arrived with two pumpers and an emergency truck. Our machine registers the location of the alarm, operates the siren, turns the station lights on, opens the doors and will receive any number of calls thirty seconds apart.

"In regard to cost: That depends on how elaborate the device is. The material for our machine cost less than $300, new." In a further statement Mr. Gaylord said, "This machine has helped us to gain much favorable publicity by assisting us to give the best of service."

Report on recorder system

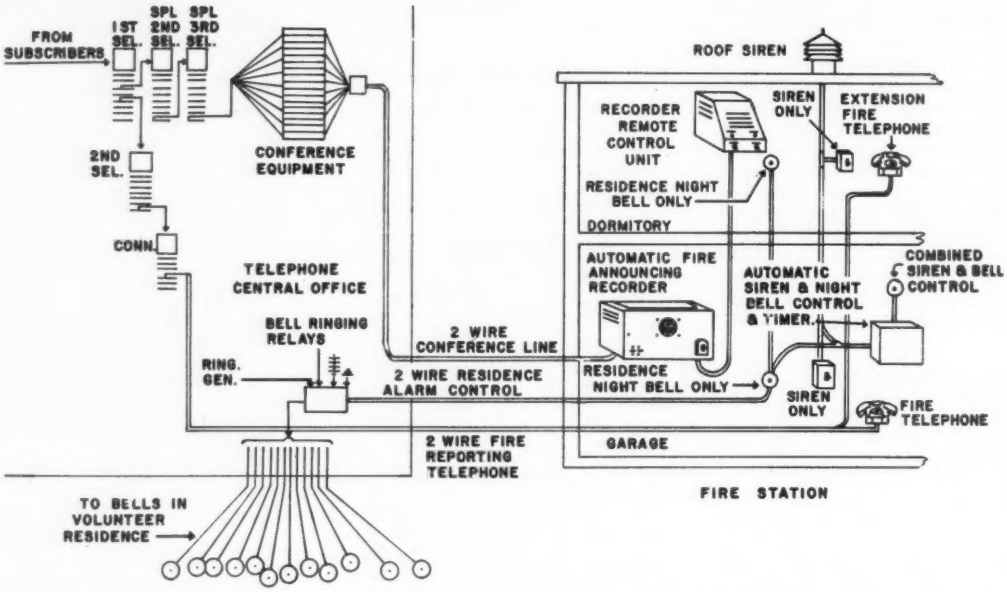
In its April, 1951, issue, FIRE ENGINEERING carried an article outlining the use of recorders in a unique system employed by the Des Plaines and Park Ridge, Ill., Fire Departments. Both of these populous suburbs of Chicago faced the problem of converting from manual telephone service to dial. The Middle States Telephone Company and city offi-

Continued on page 654



—Courtesy The Gamewell Co.

Typical fire alarm system. The air horn public alarm signal will blow the code designating the location of the street box pulled for a report of fire



Schematic diagram of the Park Ridge, Ill., Fire Department reporting, recording and signaling system. A duplicate of this system is operated by the Des Plaines Fire Department—*Courtesy Telephony Magazine*

Continued from page 653

cials jointly worked out the system. Briefly, a fireman on duty receives all calls either by telephone, box alarm or in person and records the location on an endless loop of magnetic tape. He then operates a switch which rings bells located in the homes of firemen and operates the station siren.

Upon hearing the public alarm or the house bells, firemen then dial an unlisted number to hear the recorder play back the location of the fire. The circuit used for receiving these information calls is a special 10-party conference line; should a fireman call in when the circuit is busy he receives a busy signal and by dialing back the same number in about five seconds he can get the location. The average time required for the tape to give the location is 9½ seconds. The tape runs continuously until shut off so that latecomers may respond without delay.

Chief Raymond A. Kolze, Des Plaines Fire Department, says this about the system; "We sound the siren from 7 a.m. to 10 p.m. We can also ring the bells separately for off-duty paid men or volunteers. We use this recorder for calling men for special meetings, drills or any other fire department purpose. In case of electric power failure, one man must remain at the station to operate the recorder. I might add that the three digit telephone code number has to be changed periodically due to some outsiders learning the number. Extensions can be added to the master recorder and by means of a switch, it can be operated from outlying stations. The maintenance of the recorder has been practically nil and I can say we are well pleased with this method of calling."

Radio calling systems

There are several variations of radio alerting systems now in use throughout the country. All make use of standard radio equipment adapted for fire alerting purposes, and in general employ a base station transmitter and monitor receivers.

Where the simple system of transmitter and receivers is used for one-way communication the reception of unwanted calls, especially during the early morning hours, can be very annoying. This method is best adapted for clear channel frequencies and with the increased use of radio in the fire service, such clear channels are only a memory.

In an effort to prevent this annoyance and cut out all unwanted transmissions the radio manufacturers turned to an adaptation of the selective signaling principle. By means of tone codes, either audible or inaudible, receivers can be actuated as desired to receive only those transmissions intended by the base station.

What some fire department technicians consider the simplest and least expensive are the types that respond to a single audio tone. Before transmitting the intended message the base station operator or dispatcher presses a switch that transmits an audio tone over the air. The receivers are equipped with a coding device that responds to this tone and no other. Upon receipt of this tone the receiver audio circuit is actuated and a bell may ring or a signal lamp light up. The message is then given so that the intended persons receive the instructions. The receiver then remains in operation, receiving all calls until reset, or it may automatically reset itself. Once reset, it is silent until another tone is transmitted to actuate it.

In one of the latest models the operation of the system is completely automatic. The receivers are designed to respond only when the tone is being transmitted and to remain silent in the absence of the actuating signal. The tone is inaudible and is superimposed on the transmitter carrier. All receivers operate as soon as the dispatcher presses the microphone and are cut off when the tone is off the air.

The tone system is a progressive step in the effort to make better use of congested frequencies. However it must be borne in mind that unless separate and distinct alerting tones are used in areas where common base station frequencies are shared, the signals will actuate all receivers regardless of location.

This objection can be overcome by

—*Courtesy Plectron Corp.*

Several fire districts report excellent results with this tone-controlled receiver. It remains silent until activated by the proper signal and automatically cuts off the speaker circuit 40 seconds after beginning operation

using several tones in a selective coding arrangement. The method is identical with the single-tone system but the use of several tones allows a greater variation of codes and thus better control on congested frequencies.

By use of the foregoing tone actuating systems, a better utilization of limited frequency allocations can be made. For those departments now operating on a shared basis the new systems may well be the answer to congestion and the elimination of nuisance traffic that has plagued many areas. The possibility of eliminating "false triggering" of receivers and sirens by random signals from remote areas should appeal to those interested in the problem.

How Best-Luther alerts its fire force

A receiver actuating system for alerting firemen is now in operation in the Best-Luther Fire District, Rensselaer County, N. Y. This rural district has multiple telephone exchanges, scattered residences and difficult accoustical siren coverage. It was decided to install radio receivers in the homes of key firemen to assure sufficient response to meet insurance requirements. The system is designed to be compatible with the County Mutual Aid Radio Net which uses selective signaling.

Briefly, the system is actuated by the local dispatcher upon receipt of an alarm; a tone is transmitted that starts a bell ringing at the several receiver locations. Upon hearing the bell, the fireman operates a switch that cuts off the bell and allows the voice transmission to be heard. The bell will continue to ring for seven minutes and is then shut off automatically if there is no one present at the location to monitor the receiver. Chief Ira L. Moore has stated that the application of the system to fire reporting has been satisfactory although there have been some operating "bugs". There have been no troubles due to interference with the regular operation of the county radio system.

Lexington, Neb., and Columbus, Neb., have installations of radio receivers in the homes of firemen for alerting purposes. Both systems use a receiver that responds to a transmitted tone of 1024 cycles. Approximately three seconds after the tone is first broadcast the speaker circuit closes and the firemen hear the tone until the dispatcher releases the tone button.

It has been found that a tone duration of approximately 10 seconds is best as this allows about six or seven seconds of the tone to be heard in the homes of the firemen thus providing an excellent alerting signal. The instructions concerning the alarm are then transmitted and repeated at least once. After 40 seconds the receiver is automatically deactivated and ready to receive another alarm. If additional repeats are necessary, the dispatcher transmits the tone again in the same manner.

The home receiver is equipped with terminals for attaching remote speakers if additional reception points are desired in the building or residence. If the present transmitting equipment is not equipped to handle an internal tone generator, the manufacturer of the receiver will supply a separate generator.

Chief Engineer W. G. Stapleton of Lexington, Neb., states: "This method of calling our firemen has proved very successful in that it enables the fire department to respond to many calls without causing the entire city to be notified by the general alarm siren normally used. We feel that this method of fire alarm transmission has greatly expedited the response of our men and equipment."

A word of warning to radio equipment users

Radio has proven its worth in many fire service applications and may well under favorable conditions be the answer to certain difficulties now encountered in alerting firemen. However the success of any radio alerting system depends as much on the human element as it does on the equipment.

From the moment of conception, competent technical advice should be obtained. This should be available through the various fire service organizations and from the manufacturers' representatives. In addition, there are many private engineers and technicians who specialize in radio communications. Once the needs of the community are determined and a plan decided upon, every effort should be made to see that proper installation is made by skilled technicians. Once in operation, it must be maintained by competent service men who have been well-schooled in the type of equipment involved. Proper maintenance has proved to be the most important factor on which the success of any fire service radio alerting system depends.

Carrier systems prove worth

The December, 1950, issue of FIRE ENGINEERING carried a special report on the carrier current system of transmitting alarms adopted by the village of Rockville Center, N. Y. This report created much interest and FIRE ENGINEERING and the Rockville Center Fire Department still receive requests for information on the installations.

The system is operated in conjunction with a standard box alarm setup and repeater, and is designed to carry the alarm directly into a signaling device in the home of village volunteer firemen. Signals may also be set up on a standard box transmitter and repeated in the same manner.

A carrier current transmitter receives the impulses from the repeater and transmits them as 3800 cycle notes over the village power lines (The power plant is municipally owned). The receiver for the signals is plugged into the power lines at any convenient 110 AC outlet and the signals actuate a single stroke, 3½-inch bell on the receiver and tap out the box location.

According to Henry Rippel, Superintendent of Fire Alarm, the Rockville Center Department is very pleased with the operation of the system. It has resulted in a greater turnout of men for fires and their response in better time than in previous years. Maintenance costs of the system have been negligible. The only cost of any consequence was for the original equipment and installation. The system has been expanded by 50 additional units since the initial installation and the receivers are now in 150 locations.

A system using the same principles of carrier current has been in operation at Junction City, Ore., for several years. Known as the Electronic Fire Alarm System, or "Efas" for short, it was designed to overcome the dead spots of siren coverage resulting from wind direction changes.

The local telephone operator activates the public siren upon receiving an alarm of fire. Upon operation of the siren, the carrier transmitter begins sending pulses over the power lines which ring bells on the receiver units plugged into the house outlets. Results have been reported as "fantastic".

The search continues

As long as the nation has volunteer fire fighters the problem of alerting them for emergencies will continue. Even with paid forces, the question of summoning off-shift personnel when they are needed must be included in the fire department communications plans.

In the foregoing we have told some of the most recent systems and methods for alerting volunteer firemen. Some of these methods are closely allied with the procedures in effect for calling off-duty firemen, as discussed in the current issue's Round Table, and those for June and July.

No one thoroughly familiar with fire department communications, particularly the subject under discussion here, believes that the fire service has reached Utopia, either in the mechanical facilities of notifying volunteers, or the methods of applying them. The field of electronic communications has hardly been scratched. In the category of wired communications, the telephone companies are presently working on systems of notification that may make obsolete over night all that has gone before. Specialists within the communications field of the fire service, likewise are at work on the problem. All of which bodes well for the future of this most important detail of fire suppression. □□

New Jersey Bans Dump Fires

An air pollution control measure went into effect May 1 in New Jersey. The first regulation issued by the State Air Pollution Control Commission was to ban the burning of waste material in open air. Exceptions allowed are the burning of leaves and weeds by householders, and industrial wastes where there is no other safe way known to dispose of the material. Violators of the code are subject to $100 fine after 10 days notice.

Fire Completes Demolition of Venerable Wanamaker Building

Protracted Fire Fought by 600 Firemen Using over Fifty Pieces of Equipment. Runoff Stalls Subway

IN PROSPEROUS PERIODS every progressive city finds itself engaged in demolition, renovation and reconstruction. New York City is a leading example. In recent years, as tenements have been replaced by housing projects and loft buildings have given way to skyscraper office structures, the flare of the acetylene torch and bonfire have become commonplace.

To the New York Fire Department however, this demolition work has meant extra threat of fire, additional and hazardous work for fire fighters, more complicated and costly hours spent in inspections and handling of permits and violations. To this department, demolition has become so serious that several fire department permits are now required.

The main cause of demolition fire hazards, according to the city's fire department experts, is the unscrupulous contractor who knows it is cheaper to burn down a building than to rip it down. Another danger stems from the carelessness of wreckers who are not worried about property loss when they flip a lighted cigarette or burning match into debris. And even before the wrecking gang takes over, there is considerable fire menace in vacant premises that often become free flophouses for irresponsibles or ready-made setups for juvenile delinquents.

Ironically at the very time the New York papers carried the story of the lowered fire losses in 1956 (there were 3,773 fewer fires in 1955 than in 1954, and fire losses showed a decrease of $1,547,845), the Wanamaker fire and its aftermath of confusion and discomfort to the city's subway riders, was making the headlines.

Carelessness blamed by commissioner

According to Fire Commissioner Edward F. Cavanagh, Jr., the Wanamaker fire is attributed to "careless use of acetylene torches" in demolishing the 94-year-old building. "It was negligence, not arson," said the Commissioner, adding that fires caused by negligence were becoming "far too common."

The Commissioner said, "It is very likely the fire was going all Friday night and Saturday (July 13-14)." It was also disclosed that the odor of burning wood had been noticed at various times for a week but wreckers thought it came from burning material from another nearby demolition job. The Commissioner criticized a watchman for "lack of judgment" in assertedly failing to report smoke he smelled on reporting for work Saturday, July 14 at 8:00 a.m.

The battle is drawn. Looking east along Ninth Street, separating the old (left) from newer Wanamaker Building. Firemen prevented extension of fire over the three-story connecting bridge (top center) and operated lines from fire escape and windows into 94-year-old former store. Note old water tower in rear. Some of these pumpers reportedly pumped steadily for over 48 hours—*Photo by Bill Patten*

One corner of the battleground. Heavy streams from deck guns and ladder pipes on Ladder 1 (left center) beat back flames. View is looking toward Broadway

It was also reported that since the building was vacated by Wanamaker it had been used as a sort of flophouse for countless wayfarers.

Building was 1862 marvel

The fire-wrecked structure, known as the original Wanamaker Building, occupied the block bounded on the north by East Tenth Street, the south by East Ninth Street, on the west by Broadway and to the east by Astor Place and Fourth Avenue. It was joined with the newer 14-story Wanamaker Building at the third, fourth and fifth floors by a bridge across Ninth Street.

The building was built in 1862 at the then amazing cost of over $2 million by merchant prince A. T. Stewart, as an uptown counterpart to the Marble Palace, a similar cavernous drygoods establishment erected 16 years earlier, farther downtown. It was built around a cast iron front, then the newest architectural twist.

Stewart died in 1876 and John Wanamaker acquired the building from his former associates in 1896. By shrewd merchandising he held Stewart's carriage trade and prospered. In 1906 he erected the companion building to the south. Then, as Manhattan trade moved uptown, Wanamaker's decided to close the old north structure, at which time the Federal Office of Price Stabilization took it over for offices, the department store concentrating in the south building at 770 Broadway. On December 18, 1954, Wanamaker's left Broadway at Ninth Street for good. At the end, the value of the north building had been set at $1,700,000.

The Astor Broadway Corporation is understood to have paid $8 million for three properties, the two mercantile buildings and a warehouse, in January, 1955.

Late in June demolition teams of Lipsett, Inc., a salvage company, began destruction of the venerable old building. Just 13 weeks before the old building was to be completely leveled, fire beat them to it. Loss to the salvage firm is said to be $250,000.

It was pointed out by a fire department spokesman that the Lipsett firm was investigated in 1946 for an epidemic of fires which plagued the site of Stuyvesant Town, Manhattan, while the firm was conducting demolition work. Forty-five fires were reported at that location in 13 months.

As a fire, the New York Fire Department has fought other blazes more protracted and more punishing than the Wanamaker fire. Few, however, have necessitated the use of so many fire fighters and equipment and so much fresh water—estimated at 50 million gallons before complete extinguishment. And perhaps none in which the floods used to control the blaze caused so much damage to the city's transportation system and inconvenience to its subway riders! The resultant damage to the BMT and IRT lines is estimated at $250,000.

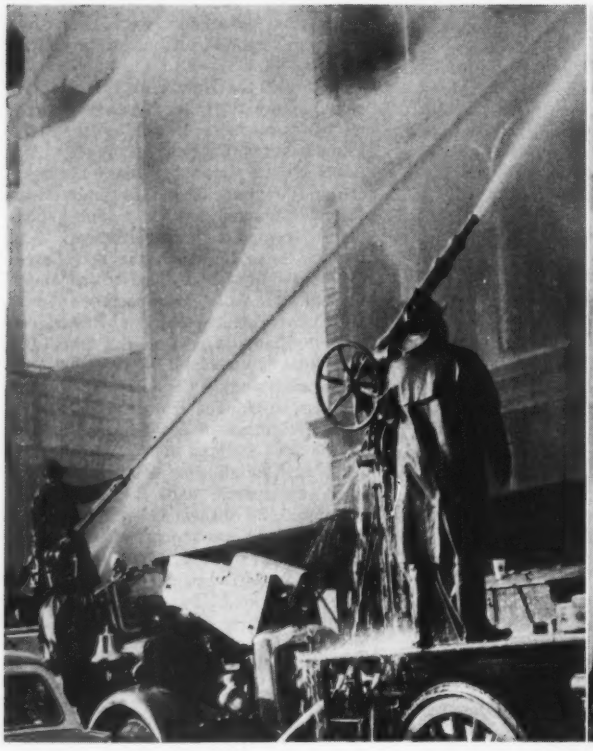
Notwithstanding the fact that the fire was largely fought from the outside, a high percentage of fire fighters engaged in the fray suffered injury. Of the 600 men who fought the blaze during the long engagement, some 208 were listed as injured, 29 of them being hospitalized. None of these was seriously hurt. For the most part, injuries were exhaustion, smoke narcosis, impaired vision, cuts and puncture wounds. In addition to departmental medics, the Bellevue Hospital disaster unit and personnel of other hospitals were on the scene.

Responding on the first alarm from Box 447 at 5:45 p.m. Friday, July 13, were four engines, two ladders, Second Division Chief O'Connor, Sixth Battalion Chief White and Fourth Battalion Chief Arnaiz, with Fire Patrol 1. The second alarm followed at 6:01, spaced by four additional alarms at between 10 and 15-minute intervals.

First arriving companies took hose lines into the building in an effort to reach the deep-seated blaze in the vast accumulation of rubble. Portions of some of the floors and the iron columns of the building's vast interior rotunda were standing. Some holes were cut in floors in an

COVER ILLUSTRATION

The bird's-eye view of the partly demolished and burning Wanamaker Building on the second day of the fire illustrates the type of construction in the venerable landmark, the explosures — notably the 14-story south Wanamaker Building with the connecting three-story bridge. View is looking east over apartments facing Broadway down Tenth Street (left) and Ninth Street (at right). Fourth Avenue and Astor Place are hidden by smoke. Observers on apartments, foreground, and on taller Wanamaker structure equipped with pack-set radio, guide operation of heavy fire streams. At this stage no firemen were operating within the burning building. Crews later entered to overhaul.



Two of the city's ancient water towers were called into service to add their bit to the 30,000 gpm reported discharged during peak of fire. One of the city's 1000 gpm pumpers is shown operating turret

—Photo by Bill Patten

First of the department's "aerial towers" (Ladder 1) getting into action. One line and tip ladder pipe operating; second nozzle on main section being readied. This is layout described in the July issue of FIRE ENGINEERING

effort to bring distributors and cellar pipes to bear on the concealed fire, but even with the reinforcements coming in on the "multiples" it was evident that in the growing darkness and the danger of falling floors and walls in the vast mutilated structure, little progress could be made and there was possibility of heavy injuries to personnel, operating in the interior. Therefore, sometime after 9:00 p.m., all hands were ordered out and the building which was then literally surrounded by master streams from water towers (two were used notwithstanding the department's signified intention to put them into reserve), deck guns and hand lines. An innovation in fire fighting with New York firemen, at least, was the operation of the department's first "aerial tower" (described in the July issue of FIRE ENGINEERING).

Ladder 1, the only metal ladder to be equipped with ladder pipes on both the main and fly sections, went into action on the Fourth Avenue side where its two powerful streams did heavy execution.

Fire fighters were well aware of the hazard posed by the below-level tunnel and street bridge connecting the north and south buildings at the third, fourth and fifth floors. Hose streams were operated to beat back any extension of the fire by means of these channels. Lines were also taken up into the south structure and operated across the street, as shown in the accompanying illustrations.

The fire fighting was directed by Acting Chief of Department Arthur J. Massett who remained on the fire ground for 21 hours before retiring for rest. Fire Commissioner Cavanagh, who left a formal party to attend operations, remained continuously from 6:00 p.m. Saturday to 11:00 a.m. Sunday.

At 3:00 p.m. Sunday, Chief Massett turned the direction over to Assistant Chief Edward G. Conway who returned from his vacation a day ahead of time. Chief Massett returned shortly and about 7:00 p.m. Sunday pronounced the main body of the fire under control.

Attack controlled by radio

The department's mobile and pack-set radio played a major part in fire control operations. The hub of communications was the new field communications unit which was stationed on the east side of Fourth Avenue. It kept in close touch with fire fighters within and outside the burning building, utilizing walkie-talkies on a broad scale. Information on the progress of the fire was relayed to top command on the scene and to fire headquarters.

Public broadcasting, which increased in volume as the fight wore on, and the grapevine rumors of disaster, continued to swell the army of the curious. They were kept well away from the fire zone by heavy detachments of police who did an excellent job not only above ground, but below, in helping to avert panic and serious injury as the water stalled trains, forcing passengers to disembark.

Replacement of tired working fire forces by fresh men brought in by special orders, had a salutory effect. The largest force said to be operating at any one time was not over 200. All-told, approximately 600 fire fighters were used in the action. Additional crews and equipment remained for several days to guard against any resumption of fire.

Chronology of response

Saturday evening, July 14:

Box 447, Fourth Avenue and Ninth Street at 5:45 p.m.—Engines 33, 72, 5, 14; Ladder 3, 9; Chief O'Connor, Division 2; Chief White, Battalion 6; Chief Arnaiz, Battalion 4; Fire Patrol 1.

5:53 p.m.—Signal 75-447 signifying "all hands working."

6:01 p.m. — Second alarm by Chief O'Connor—Engines 18, 13, 28, 55; Ladder 20, Water Tower 2; Assistant Chief Carrig. Locating—Engines 32 to 33, 21 to 50, 34 to 18; Ladders 12 to 3, 1 to 9 (Ladder 1 was later called to the scene by Acting Battalion Chief Harry Irwin, Supervising Engineer, for use as an aerial tower).

6:17 p.m.—Third alarm by Chief Carrig—Engines 16, 24, 31, 11, 17, 7; Chief Curry, Battalion 36; Fire Chief Massett; Fuel 12; Ambulance 1. Locating: Engines 44 to 16, 256 to 13, 213 to 11, 221 to

Continued on page 663

“the successful commercial application of nuclear energy in the field of fire protection is now an established fact . . .

Pyrotronics

NUCLEAR FIRE DETECTION AND FIRE ALARM SYSTEMS

A MESSAGE FROM THE CHAIRMAN OF THE BOARD...

Mr. S. R. Baker

BAKER INDUSTRIES INC.

10 EMPIRE STREET NEWARK 12, NEW JERSEY

OFFICE OF CHAIRMAN OF THE BOARD

To Those Concerned With The Prevention Of Fire:

I am pleased to announce the establishment of Baker Industries, Inc., as the new name for the former Pyrene-C-O-Two Corporation. Sale of manufacturing and trade mark rights for Pyrene-C-O-Two fire extinguishing equipment to Fyr-Fyter Company of Dayton, Ohio, has necessitated this new corporate title to avoid confusion of products.

Thus, as a fully-established corporation under a new name, Baker Industries, Inc. will continue to design and manufacture finer and more efficient fire-prevention devices, and to render the kind of service to industry and to the home that has identified Pyrene-C-O-Two Corporation for so many years.

Among our most recently developed products, we are especially proud of Pyr-a-larm, a revolutionary nuclear fire detection system, formerly called Pre-Detector, which is now serving in plants, warehouses and offices of some of the best-known firms in the country. Produced by the Pyrotronics Division of Baker Industries, Pyr-a-larm's outstanding performance has more than justified the contention of our engineers and designers that the successful commercial application of nuclear energy in the field of fire prevention is now an established fact.

Mr. Harold J. Burke, who was associated for a number of years with Pyrene C-O-Two Fire Equipment Co. as manager of Systems Division, and later as Vice-President of Pyrene-C-O-Two Corporation, is now Vice-President of Baker Industries, Inc., and General Manager of Pyrotronics Division.

An engineer, former Chief of Department, The New York City Fire Department, and a Captain in charge of the U. S. Navy's World War II Fire-Damage Control program, Burke is admirably equipped with the technical and practical experience required for his present position.

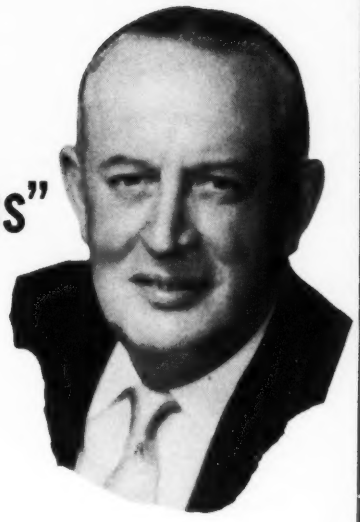
His spirit exemplifies the spirit of the men who make up Baker Industries, Inc. -- where talents and energies are directed in a constant search for new and better methods to prevent costly fire damage.

S. R. Baker
Chairman of the Board

"A long step ahead of conventional systems"

says Mr. Harold J. Burke,

General Manager of Pyrotronics Division.



"If the national fire loss is to be reduced, we must look for quicker detection of fire — warning in time to give the Fire Department a chance. When thermal detecting devices operate, a serious fire *already exists*. Why wait for dangerous temperatures to build up when modern science makes the presence of smoke, heat or flame unnecessary for an alarm?

"Because Pyr-a-larm is actuated by the products of combustion — *before* the fire has a chance to develop — it is certainly a long step ahead of conventional, thermally-sensitive alarm systems! Fire fighting experts will recognize it as a tremendous advance toward the eventual prevention of loss of life and property through accidental fires.

"I believe that the list of firms, both large and small, which have installed Pyr-a-larm Systems tells the best success story. Here, providing protection for greatly varying services and manufacturing processes in all parts of the world, Pyr-a-larm is proving itself conclusively. It is fully approved and listed by Underwriters Laboratories, Inc., and by Factory Mutual Laboratories. In many cases, installation of the Pyr-a-larm System will reduce insurance premiums.

"As you are aware, the need for early warning fire protection is growing every day. With this in mind, we cordially invite inquiries regarding the Pyr-a-larm System, and will be glad to make recommendations for your particular plant, warehouse or office requirements."

PyroTronics
A DIVISION OF BAKER INDUSTRIES, INC.

THESE ARE SOME OF THE FIRMS WHICH HAVE INSTALLED THE PYR-A-LARM SYSTEM:

- Consolidated Edison
- Illinois Bell Telephone Company
- U. S. Department of Commerce National Bureau of Standards
- Bethlehem Steel Company, Inc.
- Westinghouse Electric Corp.
- U. S. Department of the Navy
- New York City Transit Authority
- National Broadcasting Co.
- Convair—A Division of General Dynamics Corporation
- Tung-Sol Electric, Inc.
- Radio Station WGN, Incorporated
- Southern Railway
- North American Aviation, Inc.
- Heidelberg Brewing Company
- The Glenn L. Martin Company
- Christiania General Insurance Corporation of N. Y.
- Douglas Aircraft Company, Inc.
- Chicago, Milwaukee, St. Paul & Pacific R. R. Company
- Delaware Power & Light Company
- Norfolk & Western Railway Co.
- United Airlines
- The American Brass Company

NUCLEAR ENERGY DETECTS FIRE BEFORE IT DEVELOPS

Nuclear energy — in the form of a radioactive element at the heart of the Pyr-a-larm System — is now at work in the fire-detection field.

Pyr-a-larm reacts to the invisible products of combustion and does not require the presence of heat, smoke or flame. It provides an early warning that can put fire fighters at the scene of an incipient fire in time to keep it under control.

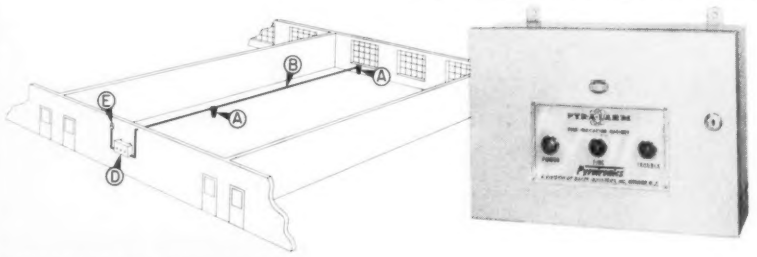
Detector heads contain a highly sensitive gas discharge (cold cathode) tube plus two ionization chambers — one exposed to the atmosphere, and the other virtually sealed off. In each chamber is a tiny foil of radium that has a half-life of more than 1500 years.

Combustion gases entering the outer chamber cause a voltage increase sufficient to ingnite the cold cathode tube, making it electrically conductive, thus operating relays which can perform any operation under electrical control, such as setting off visual or audible alarms, closing fire doors, or actuating any type of fire-extinguishing system.

Pyr-a-larm is designed to be tamperproof. Installation and maintenance are simple as there are no moving parts, and wiring is completely supervised. An entire system draws no more current than an ordinary 25-watt bulb.

Pyr-a-larm Detector Head measures 5⅛" in length, with 4½" base that mounts on a standard 4" round junction box.

Fire indicating cabinet for single space protection



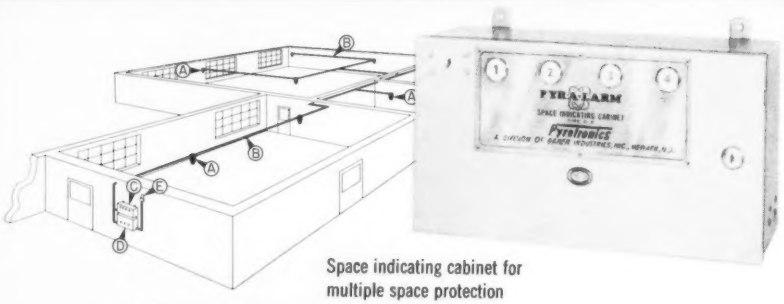
SINGLE SPACE PROTECTION

One or more detector heads (A) are connected by single circuit (B) to Fire Indicating Cabinet (D) which provides a visual signal or alarm bell (E) warning. Under ideal conditions, a single head is sensitive enough to guard up to 3600 sq. ft. of area.

Moulded phenolic socket base

Plug-in detector assembly

Anodized aluminum locking shell



Space indicating cabinet for multiple space protection

MULTIPLE SPACE PROTECTION

One or more detector heads (A) in each space are connected by separate circuits (B) to a Space Indicating Cabinet (C), which indicates the fire area, and to the Fire Indicating Cabinet (D) to provide a visual signal. Alarm bell (E) gives audible warning.

APPROVED BY UNDERWRITERS' LABORATORIES, INC., AND FACTORY MUTUAL LABORATORIES

Write for further information on the Pyr-a-larm System of fire detection.

PyroTronics
A DIVISION OF BAKER INDUSTRIES, INC.
POST OFFICE BOX 390, NEWARK 1, N. J.

NUCLEAR FIRE DETECTION AND FIRE ALARM SYSTEMS

Streetcorner conference. Columnist Walter Winchell (left), Fire Chief Massett and Fire Commissioner Cavanagh discuss Wanamaker blaze—*Photo by Bill Patten*

Continued from page 658

17. Engines 256, 213 and 221 were from Brooklyn.

6:40 p.m. — Fourth alarm by Chief Massett. Engines 30, 9, 1, 3, 12; Ladder 11; Commissary 94. Locating: Engines 26 to 30, 209 to 9, 54 to 1, 40 to 3, 205 to 12; Ladder 18 to 11. Engines 209 and 205 reported from Brooklyn.

6:49 p.m.—Fifth alarm by Chief Massett—Engines 7, 27, 15, 65, 8; Ladder 6; Commissioner Cavanagh; Deputy Commissioner Morr. Locating: Engines 203 to 7, 56 to 65, 53 to 8; Ladder 15 to 6. Engine 203 came from Brooklyn.

Note: All alarms except the original Box 447 were by radio.

Additional communications included:

7:03 p.m.—Water Tower 1 to fire.

7:52 p.m.—Floodlight 21 to fire.

8:00 p.m.—Brooklyn Rescue 2 to fire; Rescue 3 (Bronx) relocated in Rescue 1 Manhattan.

8:18 p.m.—Special call for 20 firemen (10 each from Divisions 4 and 5).

8:25 p.m.—Squad 3 from Brooklyn to fire.

9:04 p.m.—Floodlight 22 from Brooklyn to fire.

11:47 p.m.—Ladder 24 and 2 to fire.

Sunday, July 15

12:34 a.m.—Ladder 9 (Ladder 1 located) called to fire for benefit of its ladder pipe setup.

3:01 a.m.—Fuel 13 to fire.

3:30 a.m.—Deputy Commissioner Morr called for inspector from the Department of Buildings.

3:52 a.m.—Patrol 2 to fire.

3:54 a.m.—Chief Medical Officer Saland called on full medical staff to stand by for emergency duty.

11:31 a.m.—Special call, Chief Massett, for 10 men each from Divisions 4 and 5.

11:40 a.m. — Supervising Engineer Irwin requests three eductors from Marine Division.

11:41 a.m.—Chief Massett requests CD pumper to respond to Eighth Street and Broadway to pump out BMT subway.

11:53 a.m.—Ladders 6 and 11 recalled to the fire. Ladder 18 to Ladder 11, Ladder 15 to Ladder 6.

1:38 p.m.—Chief Massett called for Ladders 24 and 2. Relocating: Ladder 43 to 2 and 22 to 24.

2:56 p.m.—Rescue 4 called with all available masks.

3:35 p.m.—CD pumper from Ladder 115 called to IRT subway station, Twenty-third Street and Fourth Avenue.

5:09 p.m. Engines 16 and 5 to Box 613 to pump out IRT subway, Twenty-third Street and Fourth Avenue.

6:15 p.m. — Supervising Dispatcher Feldman made following relocations: Engines 36 to 16, 35 to 72, 41 to 35, 92 to 36; Ladders 119 to 9, 14 to 7, 29 to 43. Engines 41, 92 and Ladder 29 came from the Bronx; Ladder 119 from Brooklyn.

6:30 p.m.—Engine 47 to 54.

6:51 p.m.—Radio announcement from Chief Massett reported "main body of fire under control."

7:18 p.m.—Two floodlights called.

The communications staff at the Manhattan Central Office at the time consisted of Supervising Dispatcher Feldman; Dispatchers Aliquo, Maggio, Perlman, Fireman Ries and Fireman Middlestorb with Mr. Cohen at the radio console and Anne Egan at the switchboard. Chief Dispatcher Charles Keeler was in charge of the entire operation in the Central Park station.

Other "multiples"

On Sunday, July 15, at 11:58 a.m., a second alarm was received from Box 4556 in the Bronx. This worker was handled without incident.

On Monday, with many companies still operating at the Wanamaker site, firemen were called upon to fight a threatening blaze in a six-story factory building at 9-11 West Fourth Street near Mercer, just six blocks from the Wanamaker Building.

This fire started shortly before 2 p.m. on the ground floor and spread upward and into the basement. Because so many companies were working at the Wanamaker fire, what would normally have been handled with a three-alarm assignment drew four alarms.

Twelve firemen were injured in this smokey battle, five being sent to Bellevue Hospital. Also a casualty was Spotty, the Dalmatian mascot of Engine 11, who was treated for a sore foot.

Radio also played an important role in subduing this serious fire.

But still there was no rest for some of the tired fire fighters. At 4:35 p.m. the same day (July 16), three alarms were sounded for a fire in the one-story manufacturing plant of Stormaster Inc., Dyre Avenue near the Boston Post Road. Part of the roof collapsed during the one-hour fight to control this fire, but no one was injured.

Early on the evening of July 14 water began to seep into the IRT subway at Fourth Avenue and Astor Place. About 11:55 that night a section of the track dropped four feet, derailing a four-car train. All passengers were safely evacuated from this train and efforts were made to stem the flow of run-off into the subway but without much success.

The BMT subway at Broadway and Eighth Street was also inundated, despite desperate efforts of workmen to stem the flow of water out of the Wanamaker Building.

The IRT subway was not restored to service until six days after the fire. The BMT service was restored shortly before the morning rush on the 16th. That transit services were restored so promptly was due to heavy concentration of dewatering devices and pumps, including transit subway diesel pump cars, fire apparatus and eductors, Civil Defense and contractors' equipment.

Repercussions

As a result of the fire it is expected the fire department will urge 24-hour surveillance during all demolition work. Testimony at the investigation showed that only one watchman was assigned to the premises at any time and he was concerned only with preventing trespass.

It is reported also that Mayor Wagner and his advisers are working on a proposal to set up a standard plan for handling major situations involving more than one city department. It is said the five alarm fire and flood developed (1) a lack of cooperation between half a dozen city agencies involved; (2) differences over jurisdiction between police and fire officials and (3) absence of a top authority to give the right orders and make them stick.

It is disclosed that warnings of possible flood sent the Transit Authority by the fire department were apparently ignored. Another problem, according to the press, has to do with auxiliary firemen who tangled with both police and fire. □□

Acknowledgment: The editors appreciate the cooperation of Contributor William Jerome Daly and officers and members of the New York Fire Department for assistance in the preparation of this report.

By ROI B. WOOLLEY

FIGURE 1

FIGURE 2

PART XV

Stowing, Removing, Carrying, Throwing and Stretching Covers

AFTER SALVAGE COVERS are folded, they are usually placed on the apparatus designated to carry them. The type of fold employed generally dictates the method of loading, packing and unloading, or removing the covers, although where covers are housed in compartments, as in many rescue, emergency and other vehicles, space may be a limiting factor and thus may determine the fold to be used.

Where a considerable number of covers are carried on salvage trucks, the practice is to alternate the layers or tiers of covers, one being placed lengthwise and another crosswise, as shown in Fig. 1. This permits a greater number to be carried and handled at one time, and at the same time tends to keep the folds neatly in place. Many salvage authorities make it a practice when covers are carried in open apparatus to use a special tarpaulin over the open body to better protect the stowage against moisture, heat and dirt.

Removing and carrying

The practice of removing covers from apparatus and carrying them to where they are to be used is naturally influenced by the factors above expressed, and the questions of convenience and expediency. It is the customary practice to drape the covers over the shoulder. Where several are to be carried at one time (the number will, of course, depend upon type and weight of cover) they are simply stacked on the shoulder in a manner that will provide best balance, convenient removal, and opening and application after reaching the scene of action. Where rolled covers are used (see Part XIV), it is generally preferable to carry them under the arms.

Different salvage corps and fire departments practicing salvage have developed their own methods of removing and carrying covers. Not all fire colleges teach the same procedures. Not all salvagemen can conveniently and effectively follow the same pattern, i.e., a left-handed man may have difficulty in following procedures designed for a right-handed man.

The Los Angeles Fire Department employs a convenient method of removing a cover from the apparatus and carrying it, which assures that the accordion fold (which it apparently prefers) will not accidentally unfold.

The cover to be removed is grasped on the end with one hand, with the fingers and thumb spanning all folds. It is then pulled out and balanced in the center with the other hand, after which it is then raised and pivoted over the shoulder, the operator retaining his grasp on the folds and adjusting his load for the

Continued on page 667

"Best hose ever" Chief says of

EUREKA Multiple-Woven with Dacron Filler Cords

That's the considered verdict of the Chief* of one of the first fire departments to acquire this lighter, stronger, more flexible hose. After nearly five years' use, he still enthuses, "I used to swear by Eureka's all-cotton multiple-woven, rubber-lined fire hose. Now, woven with Dacron filler cords, it's the *best hose ever!*"

It's not hard to understand his enthusiasm when you consider that a hose gains both its *strength* and *flexibility* from the filler (circular) cords. Also, the smaller, stronger Dacron filler yarn, which replaces about half the cotton yarn in the jacket, *weighs only one-third as much!* Imagine, then, all these advantages of Dacron filler yarn combined in a hose woven on Eureka's unique looms that interweave *all plies* into a single jacket that leaves no space to harbor water or dirt!

Your Eureka representative will gladly show you this "best ever" fire hose. Write or wire today. Remember, he is a fire hose specialist!

*Name on request

Note how criss-crossing vertical cords tie all plies into one solid body.

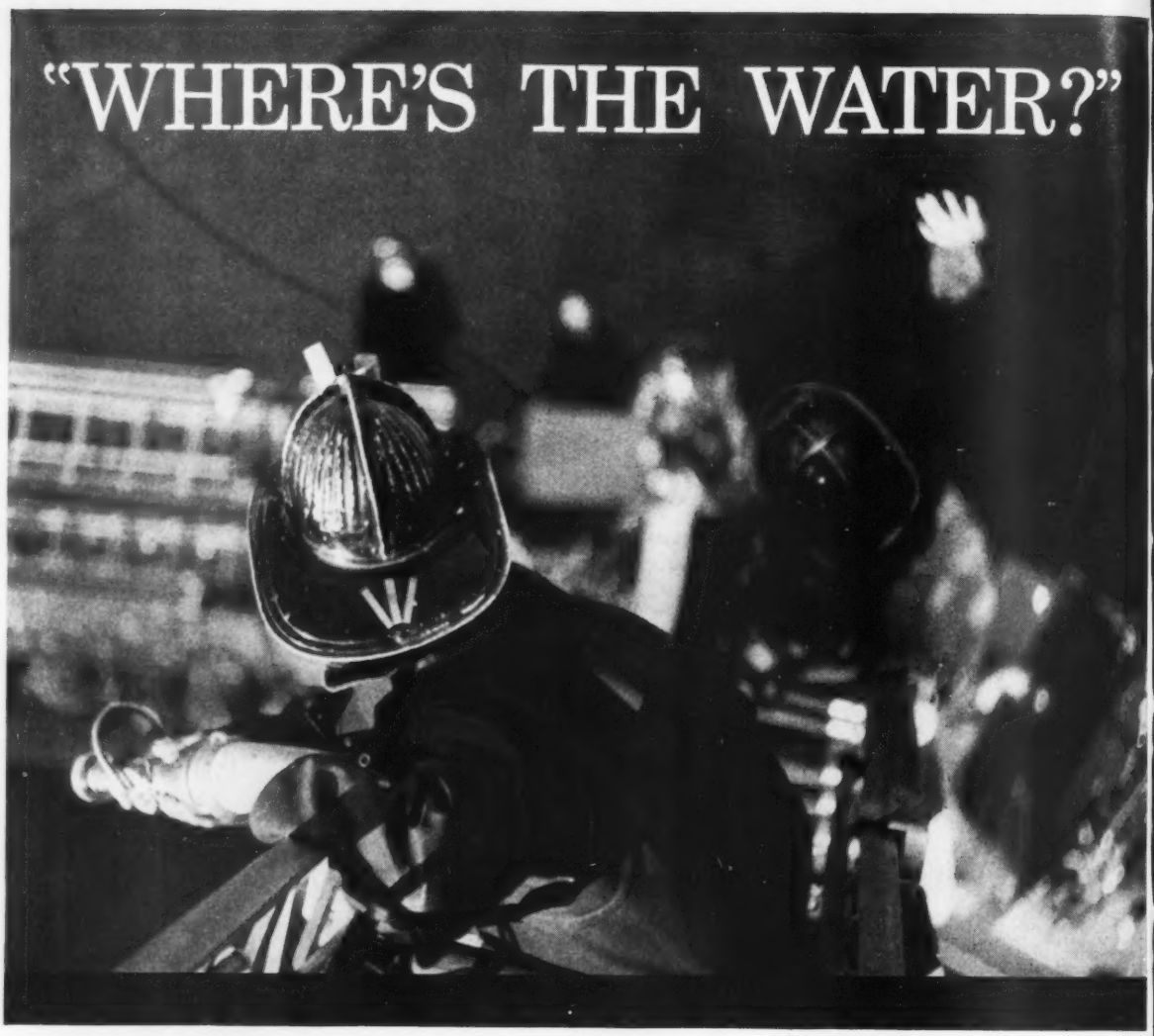
"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Rubber-Lined Fire Hose

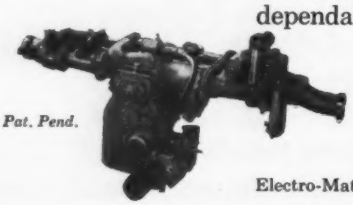
1 Market Street • Passaic, New Jersey *Division of United States Rubber Company*

"WHERE'S THE WATER?"



safe, sure, fast under all conditions . . new Waterous *Electro-Matic pump

Now, power controls meet every pumping requirement with speed and accuracy you can always count on. The Electro-Matic is the *first* fire pump to offer power operation for all major pump controls—shift, primer, discharge and transfer valves. This means less chance for error and fast, sure action. For example, Electro-Matic's Transfer Valve is controlled by a simple "Volume", "Pressure" switch. Changing operation is simple, swift and smooth, without pressure "shock" so dangerous to firemen. Electro-Matic also features a new design that reduces weight, takes much less space and offers extreme mounting flexibility. Waterways and impellers have been newly engineered for even greater performance under a wider range of conditions. All this in addition to famous Waterous dependability. Send for FREE Booklet that gives complete details.



Pat. Pend.

WATEROUS *Electro-Matic*

Dept. 302, 80 Fillmore Ave., St. Paul, Minn.

*Registration applied for.

Electro-Matic Model CM, 750 GPM, Class A. 500, 1000 GPM, 2 or 3-stage models available.

FIGURE 3

FIGURE 4

Continued from page 664

most convenient carry (Fig. 1). If two covers are to be removed and handled at the same time, it is more convenient to carry the second under the other arm, balanced on the forearm and hip opposite the shoulder being used for the first cover (Fig. 2).

The Underwriters fold is designed to be carried on the shoulder with the folded edges away from the neck (the single edges in, toward the neck) while the carrier is facing forward (Fig. 3). This position facilitates opening and stretching the cover, as is shown later. However, some salvagemen prefer a carry with the folded edges toward the neck. Stretching (spreading) is then done after the cover is lowered to the ground, rather than directly from the shoulder.

Stretching covers

The one-man throw is a quick method of covering for counters, piles of merchandise and objects such as furniture where there exists no danger of knocking materials or goods off counters, piles or racks. This fold may be thrown from its folded position by one man, or the folded cover may be placed on the stack or other material to be protected and unfolded until all the goods are covered.

The method employed in applying this fold is practically the reverse of the procedure for folding as shown in Chapter XIV (June, 1956, FIRE ENGINEERING). The folded cover is placed on the material to be covered in such a manner that the finished folds may be opened out lengthwise over the material to be protected. The lengthwise folds are then opened out to complete the covering operation. The popularity of this fold and the method of applying it, may be due to the very simple procedures that are called for in the operation.

The accordion fold affords a quick method of covering by one man where there is no danger of damage to the goods or material to be protected. In applying this fold, the generally accepted method is to place the center of the folded cover over the left forearm; grasp the bottom fold with the thumb and two fingers of the left hand (Fig. 4), then, with the thumb down, reach in with the right hand next to the body and grasp three or four top folds. Swing the right arm over the right shoulder, allowing the folds to fall back of the right hand (Fig. 5); then throw the cover as if "putting the shot" while retaining the hold on the cover with the left hand. The left arm is elevated slightly as the cover is thrown (Fig. 6).

Two-man operation

The accordion fold can easily be used by two men where conditions call for care lest the stock be damaged in the covering operation. This is commonly the situation where counters or tables display fragile merchandise such as in variety or novelty stores, drug stores and the like.

The two-man operation most widely employed follows these procedures: With the center of the cover next to the counter, one man holds the folded tarpaulin with both forearms and grasps the bottom fold with both hands; the second man takes hold of the top fold with both hands (Fig. 7). He walks backward until the cover is stretched out taut. During this operation, the first man elevates his forearms to hold tension on the cover and keep it off the floor (Fig. 8). The cover is then laid gently on the counter and unfolded and draped over the sides. The edges of the draped cover are tucked in so as to keep the passageways clear.

In the event it is necessary to protect stacks or piles of material over which there is ample headroom and there is no danger to the materials to be covered, the accordion may be ballooned, or floated over the stack. This method permits the complete covering of the materials with fewer operations. The procedure is particularly applicable and effective where the top of the stock to be covered is within reach.

One man holds the folded cover with both forearms and grasps the bottom fold with both hands. The second man grasps the top fold (Fig. 7) and again walks backward, while the first man elevates his forearms to maintain tension on the cover (Fig. 8). Both men then turn the cover so that the double fold is up and the center fold of the cover is hanging down. Both men, while retaining hold of the cover with one hand, reach with the

FIGURE 5

FIGURE 6

FIGURE 7

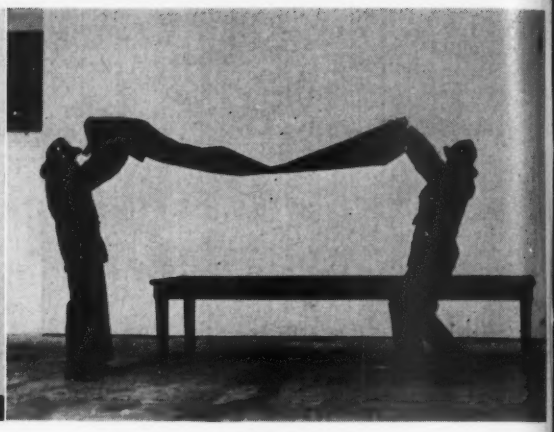


FIGURE 8

other the proper distance, depending upon the object or material to be covered, and grasp the double fold with their free hands, bringing the folds up even with the other hand. They then take a fold in each hand and pull the cover taut (Fig. 9).

The elbows of the men should be held high and the palms of the hands down. Both men snap the cover up quickly so that air can get underneath it, forming a balloon; at the same time they let go with the hands that are farthest away from the material to be covered. The cover itself is then floated over the materials, guided by the hands holding the cover next to the stack (Fig. 10). As a final operation, the cover is then draped to fit snugly over the material and the trailing part tucked in at the bottom out of the way.

Where the Underwriters fold is employed, the man carrying the cover takes hold of the two bottom single corners of the cover; the second man grasps the two top single corners (Fig. 11). If the cover has been carried correctly, these single corners will be in the center of the fold and towards the front, over the breast of the carrier. Both men step backward and stretch the cover apart (Fig. 12). The edge which is away from the stack is dropped and both men snap the cover into the air and balloon it over the material, as is pictured in Fig. 10.

Again, if there is possibility of damaging breakable materials, the cover may be stretched over the counters or other objects and unfolded carefully as required. When the material is covered, the tarpaulin is draped and tucked in around the bottom.

It should be mentioned that some departments and salvage squads which use the Underwriters fold carry it somewhat differently than is described earlier in this chapter, nor do they stretch or spread the cover in the same manner we have described. It is a wide custom to attach short lengths of rope to grommets on opposite ends of the tarpaulin. These act as convenient hand grips and at the same time, serve to indicate the correct ends of the cover to be used in the operation.

The cover is stood on end and after it is carried to where it is to be applied,

Continued on page 684

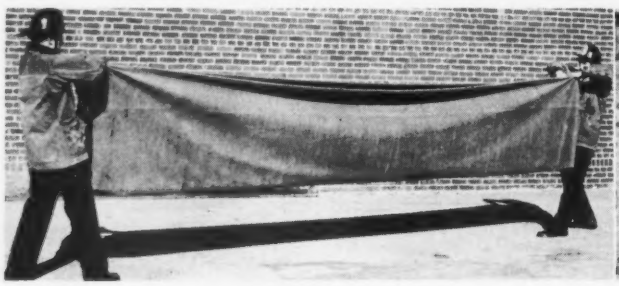


FIGURE 9

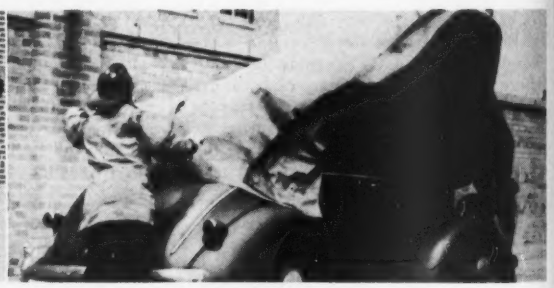


FIGURE 10

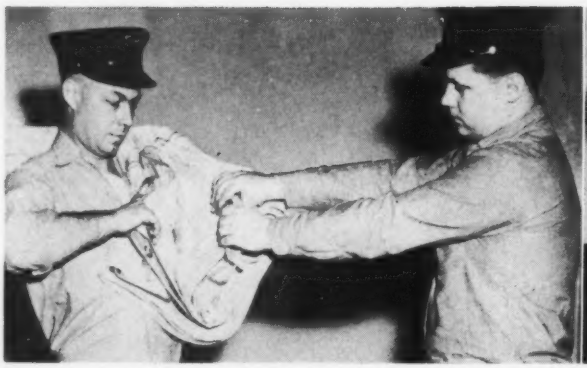


FIGURE 11

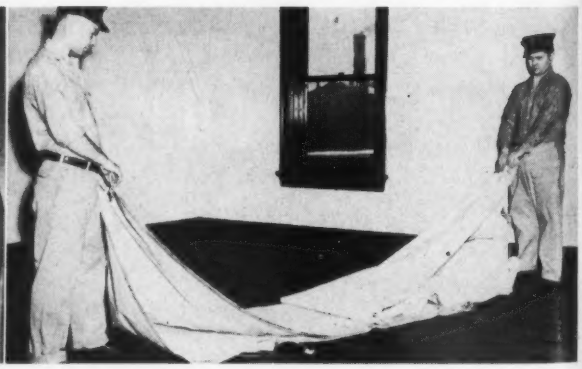


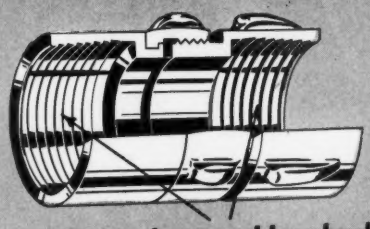
FIGURE 12

LIGHTWEIGHT
FORGEX couplings
for LIGHTWEIGHT
synthetic-fibre hose
Make Sense!

FORGEX

The lighter, tougher DROP-FORGED COUPLING

More and more fire companies specify FORGEX with every order of lightweight, synthetic fibre fire hose. Independent laboratory tests PROVE Forgex couplings up to 100% stronger than other couplings . . . yet they weigh only half as much. Drop forging's the secret . . . combines lightness with super toughness. Tested on hose to over 1500 pounds, independent laboratory tests proved that "the hose will blow before FORGEX will go." All brass, non-corrosive, cost no more than ordinary couplings.



FORGEX has the tapered hose bowl that grips the hose forever.

SPECIFY FORGEX®

AKRON BRASS
FIRE FIGHTING EQUIPMENT

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WHAT'S NEW

Among the Manufacturers

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New Safety Suit Cheats Heat

A suit that enables a man to work in temperatures one-eighth as hot as the sun's surface was demonstrated in New York on June 23.

The demonstrator six times entered an industrial furnace heated to 1,200 degrees Fahrenheit, said to be the highest temperature ever endured publicly for more than a few seconds. He stayed two or three minutes each time as if on a rescue mission.

The demonstration, sponsored by Minnesota Mining and Manufacturing Co., St. Paul, Minn., was held to show the heat-protective qualities of fabrics coated with a thin layer of aluminum, a process developed by that company. The aluminum-coated fabric reflects radiant heat instead of insulating against it.

This permits less bulky insulation, it was explained, so that a man can move and work at temperatures higher than ever before to repair, investigate, inspect or extinguish.

In the demonstration, an engineer, D. J. Bennett, wearing the aluminum-coated suit walked into the 1,200-degree oven carrying an armload of wood which burst into flames while he held them. He returned with a sheet of steel wool which flared almost immediately, and then a manikin wearing a fireman's rubber fire fighting coat and another wearing ordinary street clothes, both of which burned while he was unaffected. He topped off the demonstration by carrying in a half-inch-thick steak that cooked to medium-rare in about a minute and a half.

It was the first public showing of the aluminized fabric used in the suit. The furnace selected for the demonstration was a ceramic box furnace at Seaporcel Metals, Inc., Long Island City, where temperatures could be maintained at an even 1,200 degrees Fahrenheit.

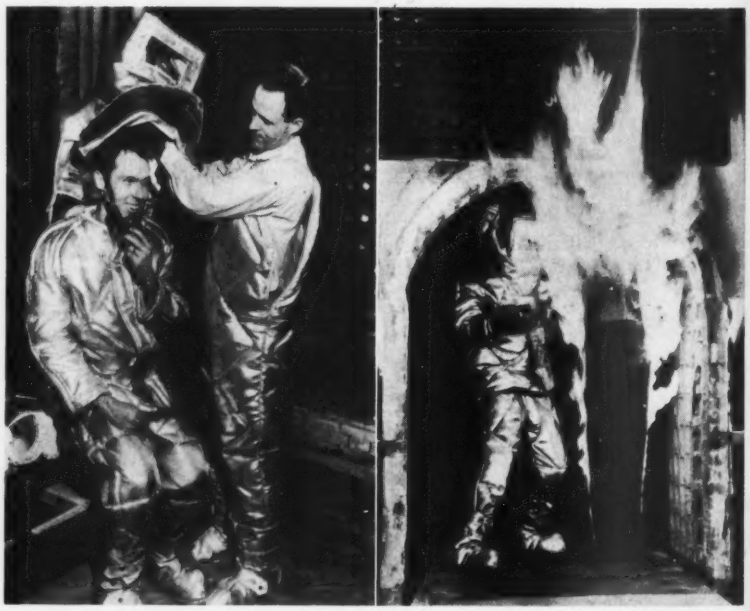
Mr. Bennett said he had worn the suit into higher temperatures, up to 1,400 degrees, and never felt the heat. "Nine-tenths of the heat is reflected away by the aluminum coating," he said, "and the little heat that gets through is dissipated by the layer of glass fibre quilting beneath the aluminum coating. The only heat I feel is the accumulation of my own body heat."

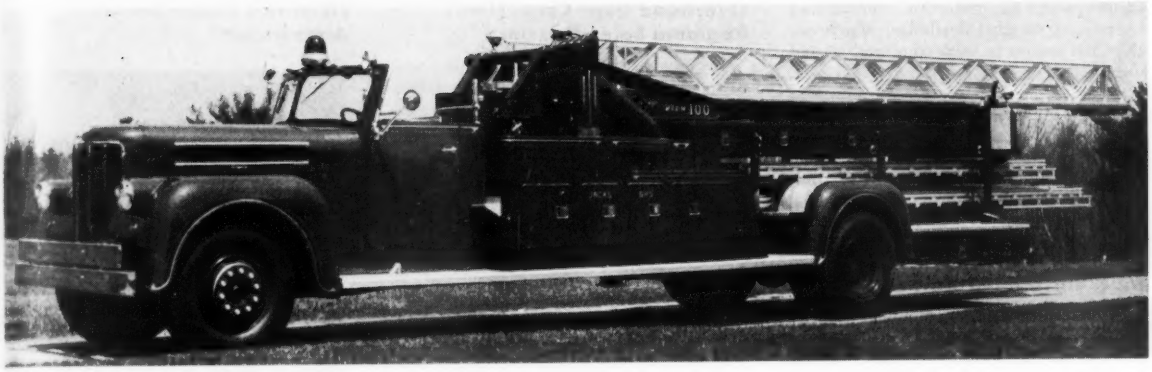
The suit used in the demonstration, produced by Fyrepel Products, Inc., Newark, Ohio, has the aluminum coating on a fibre glass material which is backed up with fibre glass quilting.

Aluminized garments now being manufactured include fire fighting coats for firemen; coats, suits, gloves and helmets for standby fire fighting equipment in industrial plants; suits for emergency personnel at airports, oil fields and other locations where emergency action can save time, money and lives.

One safety garment maker uses aluminum-coated glass fibre material, backed by a layer of rubber, to produce a fireman's fire fighting coat. The result is a lighter coat, easier to work in, yet with greater heat protection. The layer of rubber makes the coat waterproof.

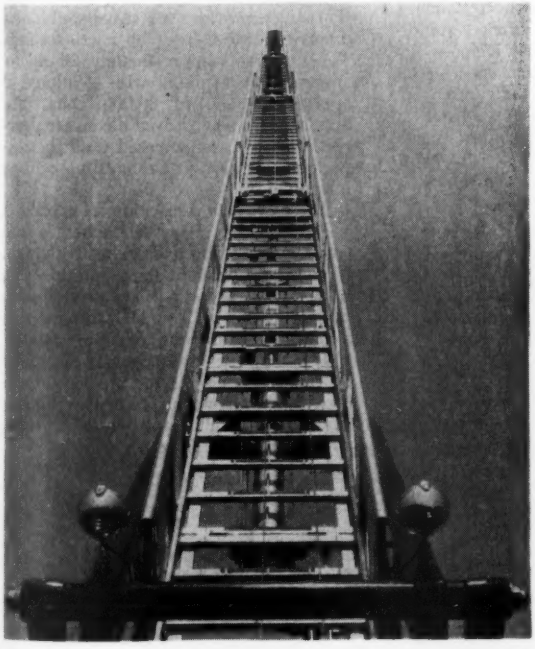
John Weaver, president of Fyrepel, said the advantages of the new fabric, evaluated in more than 2,000 garments

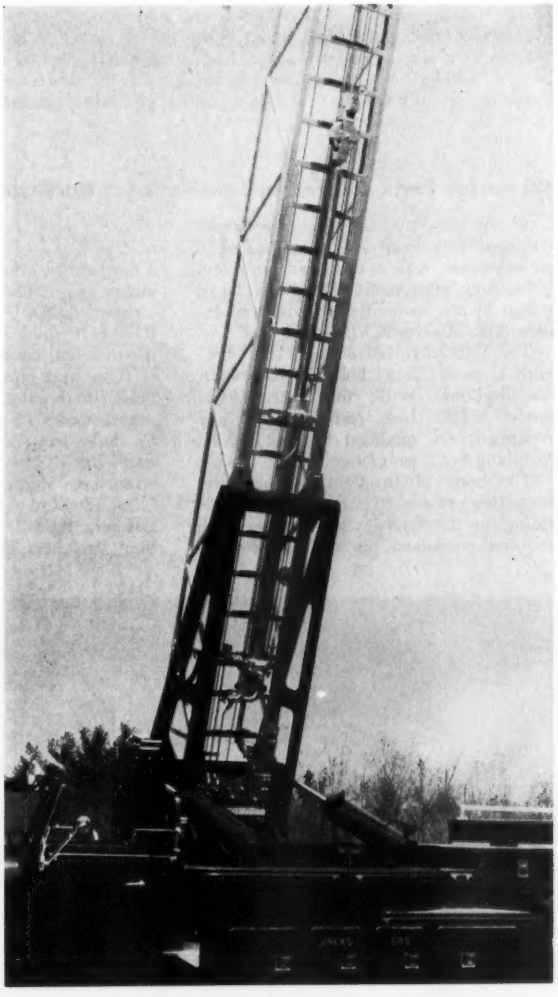




MAXIM — 100 FOOT AERIAL

HERE is an aerial specifically designed as a 100 foot unit, with tried and proven features. With unusual stability on a four wheel conventional chassis, this unit gives you NEW ladder design, MAXIM aerial ladder turntable design and all the MAXIM aerial ladder mechanisms that have made MAXIM aerials first choice of fire departments across the country. We'll be glad to give you complete information on this unit—just write us.





MAXIM MOTOR CO. MIDDLEBORO, MASS.

in 100 plants, are protection from radiant heat; light weight; flexibility, which enables the wearer to work comfortably; and durability.

Twelve manufacturers of industrial clothing are now offering such aluminized clothing nationally, C. T. Vangsness, Technical Service Engineer, Minnesota Mining and Manufacturing Co., announced.

Mack Introduces New Engine

A new fire apparatus engine, featuring a big boost in horsepower and torque is now being produced by Mack Trucks, Inc. The improved power plant is a variation of the Thermodyne engine now in service and the manufacturer claims it can develop 262 hp at 2600 rpm's, while retaining the 707 cubic inch displacement provided on the original. Torque also is increased to 615 foot pounds at 1200 rpm's.

No changes have been made in the basic structure of the engine which is of the overhead valve, six-cylinder type with a one-piece crankcase and deep section cylinder block and cylinder heads in two groups of three.

Overhead Door Corp. Holds Regional Sales Meetings

Regional nation-wide sales conferences mark a new Overhead Door Corporation sales policy at which new products, advertising and marketing problems are discussed.

The corporation, manufactures sectional upward-acting fire doors with general offices and main factory at Hartford City, Ind.

It also produces a complete line of electric operators for its doors and an electronic door opener, the "Ultronic," controlled by a dash button on the car.

R. C. Casarietti Heads Daniels' Miami Office

The growing importance of Miami, Fla., as a business center has necessitated the opening of an office there by C. R. Daniels, Inc., at 918 Langford Building. Robert C. Casarietti has been selected to head this office.

C. R. Daniels, whose home office is in Daniels, Md., is one of the world's largest manufacturers of industrial fabrics and fabric products.

CD Rescue Truck Offered by International Harvester

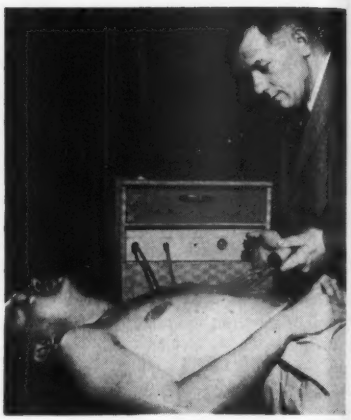
A new light-duty Civil Defense rescue truck with four-wheel-drive, designed to go anywhere with a four-man crew and emergency equipment, has been introduced by the motor truck division of International Harvester Company.

The unit, an International S-120 (4x4) with a special panel body, meets FCDA specifications. With the International model S-182 these rescue units, fully equipped, are qualified for the federal matching funds program.

The body of the S-120 comfortably seats two persons in addition to the two riding in the front seat, together with required equipment and standard supplemental tools. The model has gvw rating of 7,000 pounds. It is powered by the 131-hp International Black Diamond 240 engine, with 208.5 foot pounds maximum torque at 2,000 rpm. Tires as large as 9.00 x 16 mud and snow tread may be used. Front-mounted winch is standard.

Tools and equipment carried are detailed in the Federal Civil Defense Administration's standard item specification for light-duty units. Included are rope and line, saws, hammers, hatchets, wrenches, snips, snatch block, tackle block, five-ton screw jack, chain, extinguisher, lights, rubber sheeting, webbing, stretchers, ladders, etc.

Electronic Resuscitation Announced



The Batrow Laboratories, Inc., of Branford, Conn., has developed a method of electronic resuscitation by using electrical impulses to activate the diaphragm, reportedly without discomfort or injury to the patient.

This resuscitation method, described by the manufacturer as utilizing a new type of current in the field of electrophysiology, and called "Batronics," provides oscillations which are transmitted to the patient by means of a glass electrode filled with an inert gas under negative pressure. This applicator provides a condenser-type coupling to the body, while a metal electrode is placed anywhere on the body to complete the circuit. The manufacturer states that "Batronics" consists of a damped oscillation which provides a first half-pulse of a duration in the order of micro-seconds. The current is approximately 20 microamperes at maximum, with a voltage of approximately 0 to 60,000 volts. The applicator is placed over the solar plexus and the power is increased until the diaphragm contracts rhythmically, causing inhalation.

The electronic resuscitator is housed in a cabinet 14 x 16 x 20 inches in size and weighing approximately 40 pounds. It can be operated as a portable unit from 6-volt and 12-volt batteries, DC, and 110 volts AC or DC current with a power consumption of approximately 150 watts. The equipment is suggested by the manufacturer for use for drownings, gas asphyxiation and other breathing difficulties. For further information, write the manufacturer.

Big Beam Explosion-Proof Electric Hand Lamp

An explosion-proof electric hand lantern (Model 287EX), approved by Underwriters' Laboratories for Class 1, Group D hazardous locations, has been added to the Big Beam line by U-C Lite Manufacturing Co. The container and head are of drawn brass and finished in

Continued on page 680

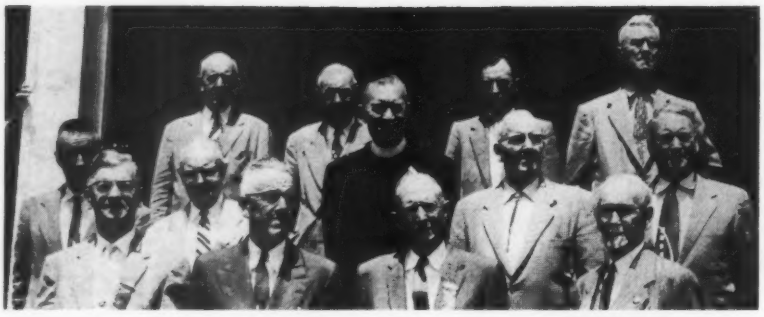
NOW... you can pre-select the stream before the "BIG STICK" goes into action!

ELKHART
JUMBO
MYSTERY
NOZZLES

with
***stream indicators for pre-selecting *stream*...**
*patent pending

There's no guess work in selecting the stream you want before these new JUMBO Mystery Nozzles go to work. The new J and JN-200 Nozzles now feature indicators for pre-selection of stream... and this pre-selection is done by merely turning the barrel until the desired stream selection is opposite the arrows. Straight Stream 30°—60°—90° fog are shown on the indicator. "O" ring type packing assures a more lasting seal. Elkhart's newly patented inner construction now affords easy operation under any pressure. For further information please write —

ELKHART BRASS MFG. CO., INC. ELKHART, INDIANA



Officers New England Association of Fire Chiefs 1956—Front row, left to right: Chief T. H. Slaman, Wellesley, Mass., 1st Vice-Pres.; Chief H. S. Jose, South Portland, Me., Pres.; Chief C. H. Green, Concord, N. H., 2nd Vice-Pres.; Ex-Chief J. W. O'Hearn, Watertown, Mass., Sec.-Treas. Second row, left to right: Chief G. L. Foss, Wolfeboro, N. H., Dir.; R. B. Woolley, N. Y., Technical Consultant; Rev. M. F. Collins, Somerville, Mass., Chaplain; Ex-Chief O. T. Sanborn, Portland, Me., Dir.; Chief F. J. Dagon, East Hartford, Conn., Dir. Rear row, left to right: Chief W. J. Dooling, Malden, Mass., Sgt.-at-Arms; Chief A. H. Koltonski, Rutland, Vt., Dir.; Chief B. A. Curran, Scituate, Mass., Dir.; Ex-Chief A. J. Cote, Woonsocket, R. I., Dir.

New England Chiefs Conference Hits High Level

IT IS DIFFICULT to describe the annual conferences of the New England Association of Fire Chiefs without resorting to superlatives. Each year the gathering from open to final gavel sets new standards.

The 34th Annual Conference held this year at Wentworth-by-the-Sea June 25-28 inclusive, as for nearly a decade, was no exception. It broke records for attendance (800 total, with 621 actual registrants); for exhibits—the Exhibit Hall was sold out, exhibitors holding forth in the open spaces; and for member participation in the technical and business programs.

Each year the New England Association devotes more of its technical and educational sessions to the audience participation type of program, in which a panel of representative fire chiefs (one from each of the five New England states) and a moderator, engage in lively questions and answers sessions.

This year, two entire half-days were devoted to these round table panel discussions and quizzes, in which pertinent problems facing the fire service got a thorough airing.

Genial Wentworth hosts, Mr. and Mrs. James Barker Smith unofficially launched the conference with a cocktail reception on Sunday, June 24.

The President, Chief John E. Keefe of Bellows Falls, Vt., formally opened the conference Monday morning, following which the Reverend John P. Fitzsimmons, Association Chaplain, of Belmont, Mass., gave the invocation.

Welcoming addresses were delivered by the Honorable Raymond K. Perkins, President of the New Hampshire Senate representing Governor Lane Dwinell; the Honorable John J. Leary, Mayor, and City Manager Robert V. Violette of Portsmouth, N. H.; the Honorable Ralph S. Frobisher, Selectman, Town of New Castle, N. H.; Chief Walter R. Messer, Keene, N. H., President, New Hampshire Fire Chiefs Club; Chief Frederick R. Crompton, Portsmouth, and Chief Thomas H. Webb, New Castle, N. H.

Chief Lewis A. Marshall, Providence, R. I., responded to the welcomes for the Association after which solemn memorial exercises were held, with the Chapel Quartette giving the appropriate musical selections. The memorial address was delivered by the Rev. Joseph P. Nugent, Chaplain, Bellows Falls Fire Department, with the Reverend Michael F. Collins, Association Chaplain of Somerville, Mass., giving the benediction.

Monday afternoon was given over to a trip to the famous Portsmouth Air Force Base of the Strategic Air Command, during which visit the delegates had opportunity to view close up what is considered the most advanced, modern base of its kind. They inspected the eight-door main fire station (there will eventually be four fire houses in all). They marveled at the fleet of sleek B-47's on the air strips, ready for instant action; had opportunity to inspect one of the jet bombers (as nearly as anyone outside SAC is permitted to pry into them) and they witnessed as a finale, crash crews of the base wade into a nasty spill fire of jet fuel. Delegates carried away with them a maze of staggering statistics about the base and the B-47. Of the latter, they learned it carries over 18,000 gallons of fuel; has a length of 107 feet and measures 116 feet span.

Technical sessions occupied all of Tuesday morning. The panel comprising Chiefs Coleman Miller, Auburn, Me.; Frederick Crompton, Portsmouth, N. H.; Roy MacDonald, Barre, Vt.; Thomas Gorman, Quincy, Mass.; Norman Broden, Cranston, R. I.; and George Graham, Bristol, Conn., with Roi Woolley, Editor of FIRE ENGINEERING as moderator, attempted to thoroughly digest the small flood of queries from the Question Box and those shot at the panel from the floor.

Of the two dozen subjects that came up for review, two resulted in resolutions later adopted unanimously by the Association.

Wide variety of subjects

Discussed were such topics as "Unification of fire emergency telephone numbers; reduction in sizes of fire apparatus; closer cooperation between apparatus and equipment manufacturers and fire chiefs; explosive hazards of metals, such as zirconium; increased salaries for fire fighters; position of rating bureau with respect to credits for tankers, radio, etc.; integration of fire and police services; problems of civil defense; electronic traffic controls; hazards of incinerators; what a chief may expect from his fire hose; manpower shortage; working crews for apparatus; obsolescence of fire apparatus; improving response, and many more.

The Wednesday afternoon sessions were highlighted by a stirring address on the recent hurricane and flood disasters by Chief Henry Thomas of Hartford.

George L. Swan, Assistant Chief Engineer, National Board of Fire Underwriters, shed considerable light on the question of adequate personnel for the fire service from the viewpoint of the Board and grading schedule.

Fire Lieutenant Robert Kennedy, photographer of the Philadelphia Fire Department, pinch-hitting for Deputy Fire Commissioner and Chief of Department George E. Hink, covered the subject "The Philadelphia Fire Department's Accident Prevention Program." Lieutenant Kennedy, many of whose outstanding photographic illustrations of Philadelphia events have graced FIRE ENGINEERING'S pages, reviewed the enviable record of his department in reducing accidents and displayed striking pictures to dramatize his topic.

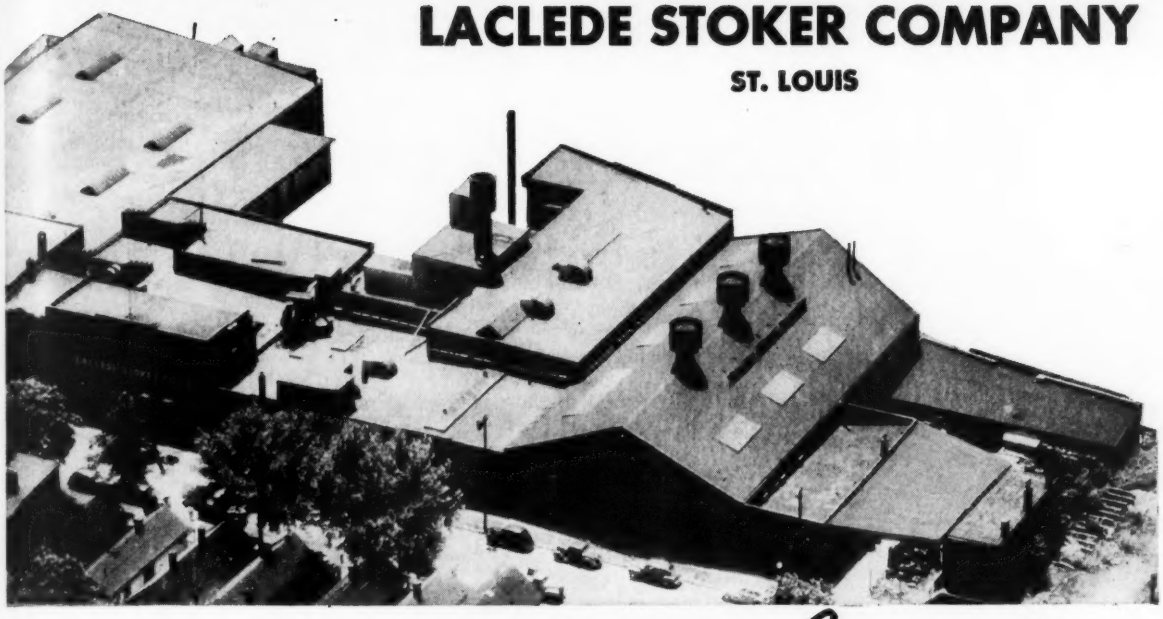
Wednesday's panel session took for its subject "Emergency Water Supply, Fire Fighting and Civil Defense." It was participated in by Paul R. Lyons, Associate Editor, *Fireman*, who introduced the topic; John C. Adams, Jr., Hydraulic Engineer, Coffin & Richardson, Inc., Boston, who spoke on "Elements of a Water System"; Brig. General John J. Maginnis, Natick, Mass., Director, Massachusetts Civil Defense Agency, and Frank Soracco, retired lieutenant of the New York Fire Department, both of whom discussed Civil Defense in its broadest aspects. Mr. Soracco is now FCDA Regional Public Safety Officer, Newton Center, Mass.

Percy C. Charnock, Manager, New

Continued on page 689

LACLEDE STOKER COMPANY

ST. LOUIS



protects its property *Automatically*... gets better FIRE and BURGLARY PROTECTION and *SAVES MONEY*

Twenty-two years ago ADT installed its systems to protect our entire plant automatically. This gave us a service far superior to the methods previously used. With ADT, we have had 24-hour-a-day protection, even in unattended areas. This service has not only served us well, but it has been a great economy.

Paul W. Kluge

President and Treasurer

ADT

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AMERICAN DISTRICT TELEGRAPH COMPANY

Executive Offices

155 Sixth Avenue, New York 13, N. Y.

A NATIONWIDE ORGANIZATION

More than two decades of experience have given Laclede Stoker Company sound basis for commending the efficiency and economy of ADT Automatic Protection. The entire plant is protected against fire by ADT Aero Automatic Fire Alarm Service, and against burglary by ADT Central Station Burglar Alarm Service.

Mr. Kluge's comment is typical of opinions expressed by thousands of business executives from coast to coast who know that ADT Automatic Protection Services give greater security for property, profits and employees' jobs than other methods, and *at less expense.*

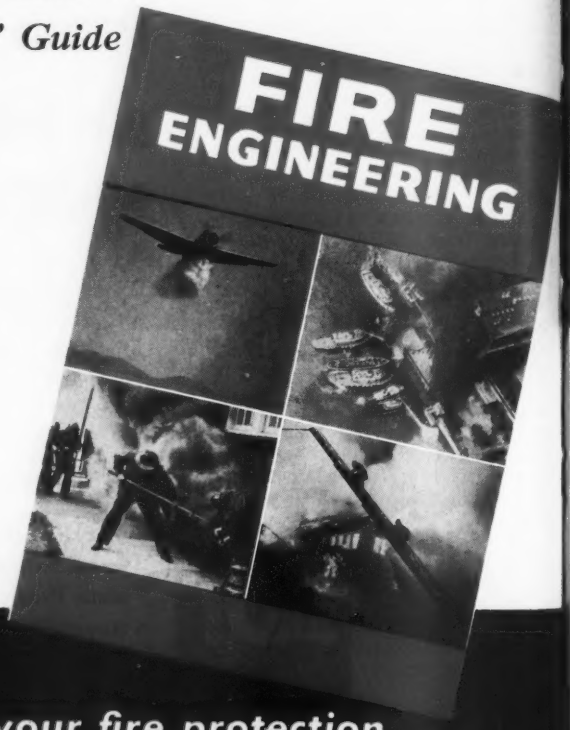
Why not find out what ADT can do for you?

Whether your buildings are old or new, *sprinklered* or *unsprinklered*, there is an appropriate ADT Automatic Protection Service to guard against fire, burglary, intrusion, heating-system failure, and other hazards. An ADT specialist will show you how combinations of these services can protect your property. Call our local sales office if we are listed in your phone book; or write to our Executive Offices.

Coming in October!

The 1956 Fire Chiefs' Conference and Buyers' Guide Issue of FIRE ENGINEERING

The year's biggest issue of FIRE ENGINEERING . . . the one that's looked for more than any other . . . the Fire Chiefs' Conference and Buyers' Guide Issue . . . is coming to you in October!



Never before in FIRE ENGINEERING's 79-year history has there been an issue that will offer so much helpful information.
In a review of progress—and with a clear, revealing look to the future—you'll find it covers:

Every important phase of your fire protection and prevention activity.

in down to earth terms

for practical application in every fire department —paid, volunteer, industrial!

All this in October's FIRE ENGINEERING . . . plus

YOUR BUYERS' GUIDE

The Field's Most Useful Directory on Sources of Equipment and Supplies

The October FIRE ENGINEERING also brings you your '56-'57 edition of the BUYERS' GUIDE. Rightfully called the "market place of the fire service" by many readers and advertisers, the guide will include

- Lists of apparatus, equipment and supplies in more than 175 different classifications.
- Names and addresses of FIRE ENGINEERING'S advertisers who manufacture them.
- Informative advertisements throughout the issue by practically every active manufacturer in the field.

You'll find the BUYERS' GUIDE in the October issue is a handy reference directory for use on a year-'round basis.

Like every issue of FIRE ENGINEERING, the October issue will be

SPECIALIZED to bring you concentrated editorial service. Every page will be geared to the needs and interests of people in fire protection and prevention, and nothing else and

AUTHORITATIVE to bring you dependable editorial service. Its contents will reflect the thinking of recognized, leading Fire Commissioners and Chiefs throughout the country.

WATCH FOR THE BIG FIRE CHIEFS' CONFERENCE and BUYERS' GUIDE ISSUE!

It's the October

FIRE ENGINEERING

305 East 45th Street, New York 17, N. Y.
OREGON 9-4000

ABC-ABP

Published by the Case-Shepperd-Mann Department, Business Papers Division, of The Reuben H. Donnelley Corporation

FALSE ALARMS

Contagious?

Little Willie was late to school and his teacher wanted to know why.

"Mommy was took sick and Daddy called the doctor and I had to fix my own breakfast."

"Heavens!" interjected the old maid teacher. "You hurry right home and find out what was wrong with your mother. Why, you might expose me and the entire class."

Willie scurried off home. In an hour back he came.

"Teacher, Mommy said for you and the class not to worry. It ain't contagious. She had a baby."

One of the best ways for a girl to keep her youth is not to be introducing him to her friends at cocktail parties.

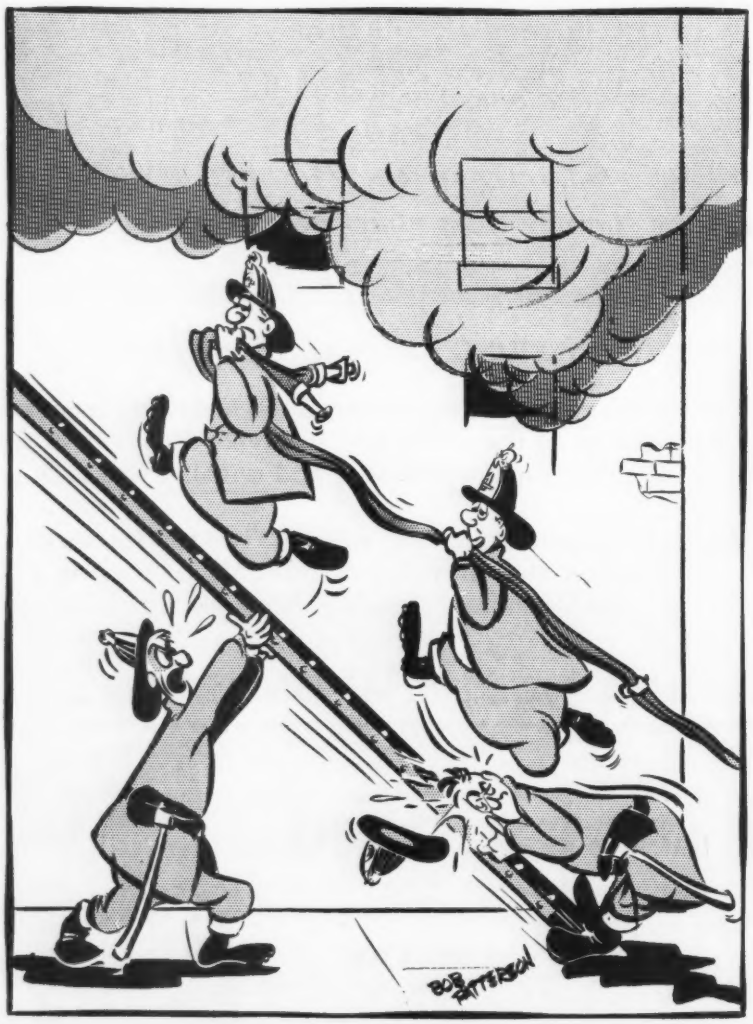
Schultz Plenty Burned

In Manistee, Mich., 83-year-old John Schultz who admitted burning down his house and four other buildings on the farm, explained that it was the only way to stop his relatives from wrangling over who would inherit his property.

Biff the Buff says that the house detective is always at the peek of his profession.

Giving the Bride the Eye

"How did you get that black eye?"
"Kissing a bride after the ceremony."
"Everybody does that."
"Yeah, but this was two years after."



"Wait a minute! Wait a minute!"

Modern Education!

Mother: "Isn't this toy too complicated for a small child?"

Clerk: "It's an educational toy, madam, designed to help the child adjust himself to the world of today. Any way he puts it together is wrong."

The man who has money to burn never has much trouble finding a flame.

Gun Shy?

Speaking of wives, there was the one who shot her husband twelve times.

"Why so often," asked the judge.

"She's hard of hearing," her lawyer explained.

A woman's face may be her fortune, but her legs draw the interest.

***Mixed Metaphors:** You never get too old to learn something foolish.*

Clarence Clawtool says that no matter how dimwitted a gal may be she has bride ideas.

In or Out

Lulu: "Do you like my new evening gown?"

Kinkchaser: "Fine, but I can't figure whether you're inside trying to get out, or outside, trying to get in."

Hospital Fare?

The veteran fire fighter was recovering from a serious operation. He had begged for food and finally the nurse served him a skimpy spoonful of rice.

A few moments later the irate patient called her and said, "I've eaten that dinner—now I want something to read. Bring me a postage stamp!"

Sign in Taproom—"PLEASE DO NOT STAND UP WHILE ROOM IS IN MOTION."

Glasses help to cure that tired feeling said the optician's ad. Trouble is most folks can't afford to fill the glasses.

Hot Entertainment

Mommy: "I'm so glad, dears, that you are not disturbing Daddy while he has his nap."

Little Dears: "We're watching his cigarette burn his fingers."

MIDWESTERN

Safety Clothing for FIREMEN

The Original
STRIPED SAFETY COAT

- ☆ ***New Yellow Rubber Stripes!***
- ☆ ***Maximum Visibility!***
- ☆ ***Maximum Durability!***
- ☆ ***Exclusive Safety Features!***

YOU deserve the BEST PROTECTION OBTAINABLE for your hazardous work of protecting life, and property against fire. The Mackinaw Safety Coat with new yellow stripes is the answer! Highly visible stripes are rubberized as part of the material . . . not painted, glued or sewed on. Tests indicate that the new yellow, like black, retains its natural color and has the same durability.

There are many imitations but no substitute for the superior quality, design, fabric texture and safety features you get by specifying MIDWESTERN!

MIDWESTERN
COMBINATION SAFETY SUIT

The Midwestern Rubberized Coat and Bunker Pants make it easy for firemen to keep both warm and dry even in the most severe weather. Close fitting collar and elastic inner sleeve keep out sparks and water. Detachable wool lining. Pants have double-stitched seams, reinforcing rivets at points of strain, large roomy pocket space.

For complete information on our full line of safety clothing for firemen, see your Midwestern dealer. A letter to the factory will also bring you literature and materials for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

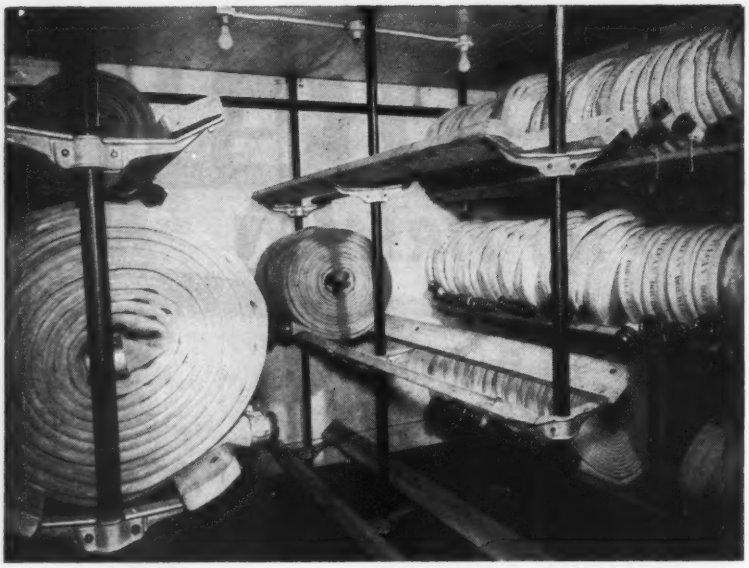
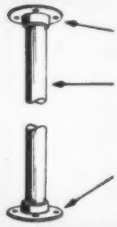


Photo Courtesy Wichita Fire Station No. 1

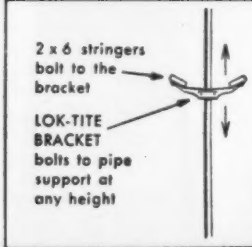
The Solution to Hose Storage Problems

FEATURES

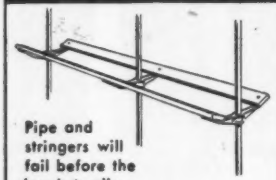
SIMPLE INSTALLATION



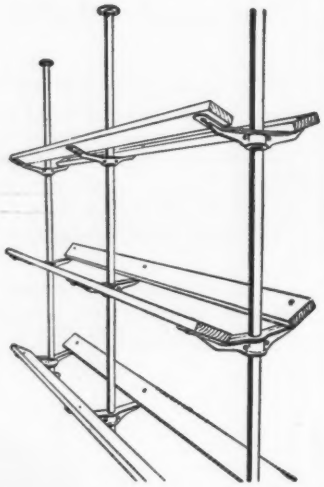
EASY ADJUSTMENT



BIG LOAD SUPPORT



Build Your Own Racks With Lok-Tite Brackets



MIGHTY few station houses have all the room they need for good housekeeping. Lok-Tite brackets help solve the hose storage problem by allowing ample ventilation and access in limited storage space.

Build your own racks with new or used materials. Design your own storage to take full advantage of the space available. Have ample room for fittings inspection and ventilation.

Lok-Tite brackets, light weight aluminum alloy, designed for strength and easy installation.

$3.65 F.O.B. Wichita

W-B MANUFACTURING COMPANY

157 NORTH WACO STREET **WICHITA, KANSAS**

MANUFACTURERS' NEWS

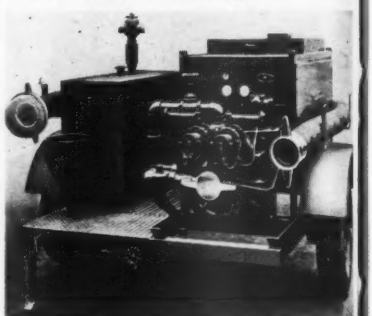
Continued from page 672

red baked enamel. The handle is die cast zinc. Wires from the container to the head are sheathed in flexible brass tubing. Lead seals on container latch and rim screw prevent tampering by unauthorized persons. The container latch can be padlocked.

The lantern bulb is held in its socket by a compressed high-tension spring clamped over the glass envelope of the bulb. When the bulb cracks or breaks, the spring crushes the bulb and simultaneously ejects bulb-base from contact socket, thus eliminating filament afterglow.

For further information, direct inquiries to U-C Lite Manufacturing Co., 1050 West Hubbard Street, Chicago 22, Illinois.

National Foam Introduces Trailer-Mounted Pump



A trailer-mounted fire pump and combination foam unit which can be moved by manpower alone when necessary, has been developed by National Foam System, Inc., West Chester, Pa. The trailer has a storage tank for 100 gallons of Aer-o-foam liquid, sufficient to produce 33,000 gallons of foam. A trailer hitch is provided.

Designed to produce foam for fighting flammable liquid fires around docks and piers where water is available only from draft, the unit can produce high-pressure streams of water instead of foam. In emergencies where water lines have been disrupted, the unit will relay water from draft to the pump suction connections of a foam truck or water pumper, at volumes up to 800 gpm. Optional equipment includes a pump of higher capacity, road lights, and a throttling valve for use when pumping from hydrants with some residual pressure.

New Extra-Long Fire Hose

A new 1½-inch fire hose weighing only 34½ pounds in a coupled 100-foot length has been developed by Fyr-Fyter Company of Dayton, Ohio. Called Super Fyr-Flex XL, this double jacket dacron hose is available to municipal and industrial fire departments in 100-foot sizes as well as in the conventional 50-foot lengths.

Eldridge New Boston Manager American LaFrance

The appointment of Harry E. Eldridge as Boston District Manager of the American LaFrance Corporation, has been announced by Gerald J. Halpin, Vice-President in Charge of Sales. He succeeds L. J. Creaser who passed away last December.

Mr. Eldridge has been associated with the company for more than 30 years in the sales and purchasing departments.

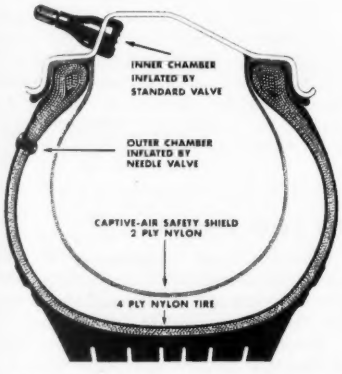
New Fyr-Fyter Directors

Three new members have been elected to the Board of Directors of The Fyr-Fyter Company, Board Chairman William M. Wetzel has announced.

Mr. Wetzel's son, William Mason Wetzel, was elected vice chairman of the board, as well as a director. Maynard A. Laswell and David McGilvray are the other new board members.

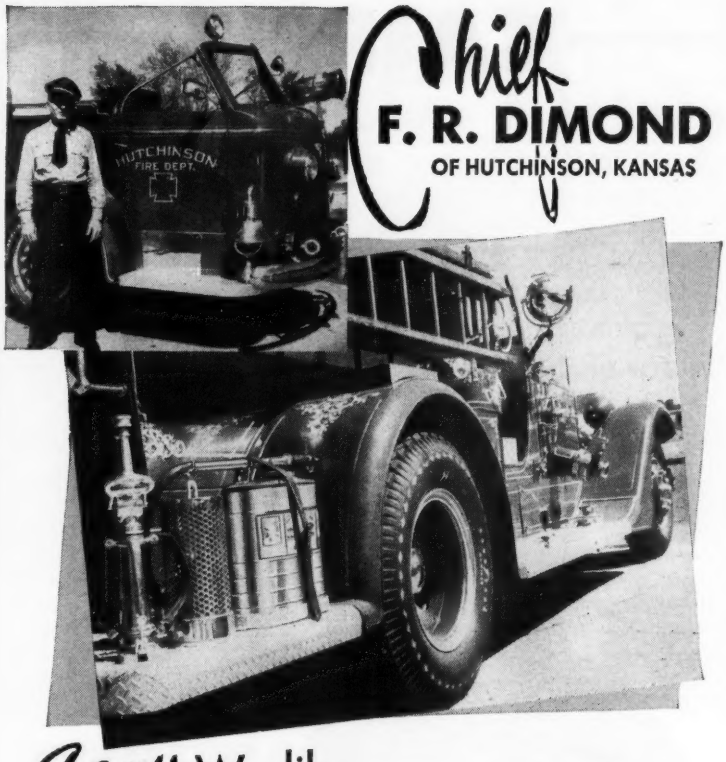
Mr. Laswell is former executive vice president and director of the Pyrene C-O-Two Corporation of Newark, N. J. Mr. McGilvray has been associated with the elder Mr. Wetzel in an administrative capacity for many years.

New Safety Tire


INNER CHAMBER INFLATED BY STANDARD VALVE
OUTER CHAMBER INFLATED BY NEEDLE VALVE
CAPTIVE-AIR SAFETY SHIELD 2 PLY NYLON
4 PLY NYLON TIRE

The Goodyear Tire and Rubber Co., Akron, Ohio, announces a new safety automobile tire that will keep going for 100 miles or more after a wide-open blowout.

Engineers describe the development as a new concept in construction, the use of a tire within a tire. Each is a separate air container filled through an individual valve. In case of blowout or puncture to



Chief F. R. DIMOND OF HUTCHINSON, KANSAS

Says: We like INDIAN FIRE PUMPS

Because they are carried on the back leaving the men's hands free for climbing ladders, etc. We use them for all Class A fires. They are easy to get off the truck and on to the back of the men using them."

NO. 90 SLIDING PUMP TYPE

NO. 80 LEVER TYPE Pump and Handle

INDIAN FIRE PUMPS are approved by UNDERWRITERS' LABORATORIES

For all Class A fires and many class B fires. Fire Chiefs say INDIANS are "worth their weight in gold."

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REGULATION

No. 710
The "STREAMLINER"
DROP BRIM

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REGULATION

No. 725
The "CAVALIER"
DROP BRIM

IN "FLINT-FLEX" PLASTIC

SINCE 1836

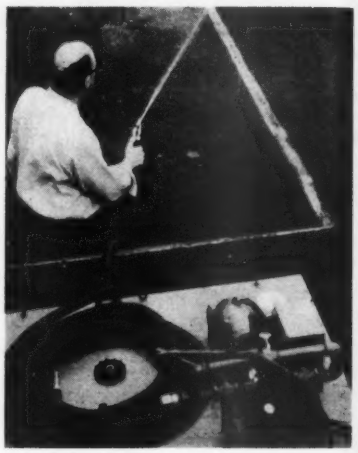
We can supply everything the fireman needs for his personal equipment. Write for Catalog 351.

CAIRNS & BRO., Inc.—Allwood, Clifton, N. J.

the outer chamber, the vehicle is supported by the inner tire and it rolls on without swerving and the necessity of stopping or even slowing down.

Mounting, inflating and servicing the dual-chamber tire are comparatively simple steps. Only one special piece of equipment is required to inflate the tire—a small needle inflation tool, similar to that used to inflate a football.

For Quick Action on Incipient Fires



A new vehicle battery-powered fire fighting unit for quick use in combating small fires is now available through McKinley Corporation, Portland, Ore.

The new "Insta-Pumper," as it is named, is a complete unit, including 90-gallon liquid tank; positive starting electric motor that runs off any vehicle battery; self-priming pump; pressure indicator; switches; battery cables; 50 feet of hose and spray nozzle. According to the manufacturer it is well suited to carry in a pick-up truck or other type utility vehicle commonly used by forest patrols, rangers and rural firemen.

The entire pumping unit is automatically and remotely controlled by regulating the hose nozzle. Normal output is 7 gpm at 20-foot water head. Complete details may be obtained by writing the manufacturer, McKinley Corporation, 721 S. E. Yamhill Street, Portland 14, Ore.

Fyr-Fyter Expands

The Fyr-Fyter Company of Dayton, Ohio, has announced the creation of two new divisions and the appointment of two top organization men to head them.

President Don O. Wood said formation of the new Fyr-Fyter Division and Accessories Division was dictated by steadily-increasing sales and continued broadening of the company's product line.

A. C. Trautwein was elected by the board of directors to head both divisions as vice president and general manager. He will be assisted in the Accessories Division by John Lohrey, who was named assistant vice president and manager.

The Fyr-Fyter Division, Mr. Wood

said, will cover sales of portable fire extinguishers, wheeled engines and other fixed fire control equipment. The Accessories Division will furnish a full line of nozzles, couplings, hose, fire hose, extinguisher cabinets and other related fire department equipment.

Mr. Wood said the board of directors created the new divisions so that the sales of the 1,063 products made by Fyr-Fyter could be separately distinguished and accounted for. He added:

"Sales of fire protection equipment in both categories have shown marked increases in recent years. The board believes that the new divisions can only accelerate further advances which will be accomplished by a stronger product development program."

Mr. Trautwein, the new chief of both divisions, has been with Fyr-Fyter since 1928. As vice president and general sales manager the last eight years, he has established Fyr-Fyter's far-flung branch offices and warehouses in 10 key cities across the nation.

In the same years, Mr. Trautwein also was largely responsible for the organization of the Accessories Division which maintains all the products in normal use by municipal and industrial fire departments. In addition to his duties as vice president and general manager, he will serve as general sales manager of the two new divisions.

Mr. Lohrey, who will assist Mr. Trautwein in the Accessories Division, has been with Fyr-Fyter for 10 years. He has devoted most of that time to aiding Mr. Trautwein in his efforts to build up the company's line of accessory products.

Aquadyne Corporation Moves Into New Plant

Aquadyne Corporation, producers of multiphase "wet water" equipment and materials, has moved into a new building housing plant and offices on Terminal Avenue, Clark, N. J.

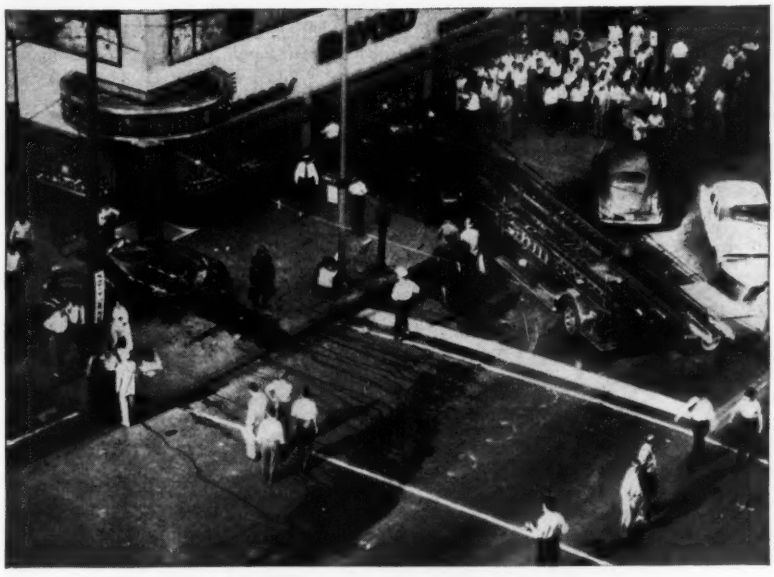
Located approximately sixteen miles from downtown New York City, the new modern building provides new and enlarged office space as well as complete manufacturing and laboratory facilities.

Motorola Unit For Congested Channels

A new line of equipment designed to give interference-free operation is now being marketed by Motorola under the name "Private Line." The base station transmits a continuous inaudible subcarrier tone when on the air and the units associated with the station respond only to the tone for which they are set.

Interference from other stations is minimized and noise practically eliminated. The manual squelch control has been eliminated and sensitivity is maintained by electronic control. This prevents loss of message by misadjustment. Units are available in the 25-54 mc and the 144-174 mc bands. For further information contact the manufacturer at 4501 West Augusta Blvd., Chicago 51, Ill.

Eliminate This!



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The driver of an emergency vehicle can have uncontested, clear right-of-way for blocks ahead . . . he can stop all traffic on his route. He does it with EL-TEC, an electronics system for controlling traffic from a moving emergency vehicle.

EL-TEC is new, but years of research and development have proved its dependability. The system and equipment have been hailed as the most important stride in emergency traffic safety in many years.

EL-TEC has been commended by the National Safety Council, the nation's leading police, fire and traffic officials as well as various State Safety Committees and Highway Commissions.

Electronic Protection Inc.

Subsidiary of Standard Coil Products Co. Inc.

2081 North Hawthorne Avenue - Melrose Park, Illinois

The Only FCC Approved System For Emergency Traffic Control

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GET THE FACTS! SEND COUPON TODAY!

You owe it to yourself, your community, your firemen, policemen and all emergency drivers to learn how low-cost, reliable EL-TEC Radio Traffic Controllers can save lives, prevent suffering, cut down property damage, keep all emergency equipment "in service."

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☐ Please have representative call.
☐ Please send literature on EL-TEC.
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Title_____
Address_____
City_____ State_____

SALVAGE

Continued from page 668

two men take hold of the short ropes as they protrude from the folds. By stepping away from each other, the cover is easily stretched taut and the ropes are then used to assist in ballooning out the cover over the material to be protected.

Ballooning the donut roll

Salvagemen who use the donut roll have, through experience and training, developed a method of ballooning the cover so folded which, like the accordion method, prevents the cover from touching the floor while it is being placed into position.*

The cover is carried to a position near the center of the material about to be covered and each man takes hold of one end of the sheet. Both then step smartly backward stretching the cover taut between them before the center of the cover can touch the floor. Each man then grasps the edge farthest away from the goods to be covered and with a quick downward snap starts the long edges unfolding; with a continuous movement the cover is then ballooned up and over the objects to be protected and allowed to float into space. Draping and tucking is then carried out as previously mentioned.

* In throwing and/or spreading covers of whatever kind, every possible effort should be made to prevent the cover from touching the floor or coming into contact with fire, or with materials that will dirty or despoil the sheet, or so soil it that when in contact with the material it is supposed to protect, it will transmit dirt and thus defeat its purpose.

Care in covering

It may be well to reiterate at this point a few general observations governing covering.

Manifestly, salvage operations are performed to preserve and protect materials and objects which might be damaged or destroyed by water. While speed is important in applying salvage covers of whatever type, it should not be at the sacrifice of efficiency. In short, the various methods of applying the protective coverings heretofore described should not be undertaken when and if the application of those protective measures may mean greater damage or destruction than would be the case were the measures not applied.

The procedures, like the folds described and illustrated, are suitable to the conditions imposed by the manpower available and conditions under which the covers must be transported, carried and applied. There is a cover fold and a method of spreading or throwing applicable for all salvage squads and crews. Experience, testing and drilling should determine the methods and the materials (covers) best suited to the individual department's requirements.

We have mentioned the wisdom of keeping covers clean and free from contact with damaging elements. It would be foolhardy to stretch a cover by dropping the center of it into water already several inches deep on the floor. Even though it was designed to be stretched and ballooned in the manner described, it still can be laid on the material to be protected and unfolded over it.

The same reasoning may be applied to having the right side of the cover facing, and in contact with the protected material. In the initial stages of a salvage operation, speed may be essential. While care should be exercised in positioning covers, it may happen that one cover will be applied wrong side up. In such a situation, covering of the remainder of the material should continue until the whole is protected, after which another cover may be obtained to replace the one improperly spread. The important thing to remember is that protection from water is the primary objective and even a cover positioned wrong-side-to will afford this protection. □□

Acknowledgement: The author gratefully acknowledges the cooperation of the Los Angeles Fire Department, William Miller, Chief, and the New York State Division of Safety, M. H. Prendergast, Director, in permitting the use of photographs and data used in this installment. Figures 1, 2, 4, 5, 6, 7, 8, 9, 10 are L.A.F.D. photos. Figures 3, 11 and 12 are from the N. Y. State Division of Safety.

Announcing the Model H/M
PAK-FONE
2-WAY RADIO

- HAND-CARRIED. EXTREMELY COMPACT.
- BUILT-IN LOUD SPEAKER. CONVENIENT MONITORING.
- RELAY SQUELCH. SILENCE BETWEEN CALLS.
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- WITH UPC-100, OPERATES FROM 6, 12, 24 VDC AND 117 VAC.
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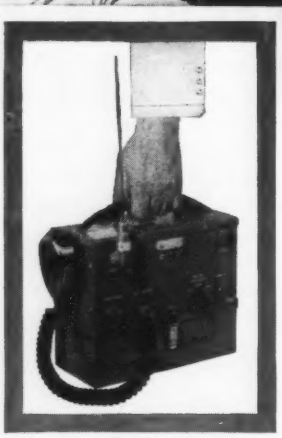
- A HEIMARK DESIGN. FCC AND FCDA DESIGNATIONS.

The Model H/M Pak-Fone is being widely accepted by Police and Fire Departments because it does not require holding a handset to the ear. Also, the annoying "rushing" characteristic of other hand carried portables on standby is eliminated by the use of a relay squelch.

Write or wire today for a demonstration in your community or send for literature.



Industrial Radio Universal Power Converter UPC-100

New power supply operates Pak-Fone and other portable 2-way radio equipment from 6, 12, and 24 volt storage batteries or 117 volts A.C.

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Questions and Answers

Term "Fire Fighter"

To the Editor:

I understand that several states have legislation that officially names those engaged in the fire suppression business as fire fighters. Could you give us the names of the states?

Answer: FIRE ENGINEERING has not kept any records on this subject. From reviewing printed matter and correspondence from and dealing with the fire service, we note an increasing preference for the term fire fighters.

We do know that in 1952 the State of Massachusetts adopted a measure designating fire fighter as the official term, to prevent confusion with the designation of stationary boiler firemen.

Testing Fire Pumpers

To the Editor:

I wish to make a test of a pumper. How can I find the rpm of the engine from the speed counter take-off on the pump panel? The speeds connection is marked "One half pump speed." C.S.

Answer: Take the readings for a full minute on a hand counter and multiply by two to obtain the pump speed. Consult the delivery certification papers or the manufacturer's manual to find the engine to pump speed ratio. If the ratio shows the pump speed is higher than the engine speed (as a rule in centrifugal pumps), divide the pump speed by the figure given to obtain the engine speed. If the figure is less than one (common in rotary pumps) multiply for the answer.

The count should be taken frequently during the test to obtain sufficient readings for obtaining a good average. If the test is for a half hour, three or four readings are usually made. If for a longer period, counts are usually made about every 15 minutes.

June Fire Losses

Estimated fire losses in the United States during June amounted to $74,770,000, the National Board of Fire Underwriters has reported.

According to Lewis A. Vincent, NBFU's general manager, this $74,770,000 loss represents a decrease of 14.7 per cent from losses of $87,681,000 reported for May, 1956, and an increase of 5.6 per cent over losses of $70,828,000 reported for June, 1955.

Losses for the first six months of 1956 now total $517,403,000, an increase of 10.1 per cent over the first six months of 1955, when they amounted to $469,757,000.

These estimated losses include an allowance for uninsured and unreported losses.

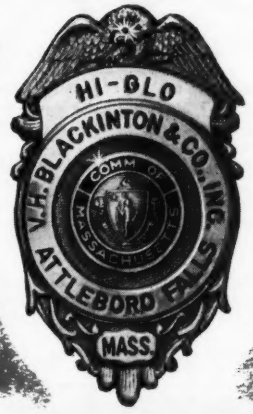
A TRICK?-Yes!

HERE'S HOW

All eyes will be on you when you perform this little mystifier. All you need is a handkerchief, a toothpick, and an audience! Wrap a toothpick in a handkerchief. Ask a spectator to break the toothpick in the handkerchief, then shake it out and behold! — the toothpick is magically whole again. Here's the secret: before performing, insert a toothpick in the hem of the handkerchief. During the trick, offer this toothpick to be broken, keeping the one provided by the spectator protected in the palm of your hand. It's simple to do, yet never fails to baffle. Try it!

A TRICK?-No!

No tricks are needed to focus all eyes on your handsome BLACKINTON badge. It's a real attention-getter, artistically designed and expertly made. A BLACKINTON badge is a badge you can be proud to wear.



Ask your equipment supplier to show you samples of BLACKINTON badges and see for yourself.

Have you seen the new Hi-Glo badge — the badge you can polish, polish, polish.

BLACKINTON

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BADGES AND UNIFORM INSIGNIA FOR EVERY SERVICE AND INDUSTRY

Among the Buffs

By Paul C. Ditzel

THIS BEING the time of year when fire chiefs and buffs, too, turn their attentions to the annual convention, reminds us that delegates this year have a happy experience in store for them in Miami.

Miami, famous for other attractions which happen to skip this Californian's memory at the moment, boasts a fire museum second to none in the nearby spa of Hialeah.

Chief engineer of this famous Hialeah Fire Engine Museum is Vincent K. O'Meara, a buff of no little national standing as constant readers of this column know.

Vince says he'll have the museum as spotless as a Los Angeles firehouse by the time the convention starts. The gallery of firemania will be part of the scheduled bus tour the chiefs will take while in Miami. To those of you who most likely will miss the bus or get sidetracked at the race track, we offer the additional information that Vince's showplace is just six blocks from Hialeah Race Track. (That's a mighty long walk in the Florida sun if you lose your shirt at the track.)

Vince's museum, in case you still get lost, is located at East 10th Avenue and 27th Street and you'll find Brer O'Meara eagerly on hand to show buffs and chiefs through it. The attraction is a non-commercial project open free to the public—which just goes to show you how wealthy some buffs can be. It is approved by the city and also the Chamber of Commerce.

A recent picture page layout in a Hialeah-Miami newspaper and story by Ed Ritter says Vince's hall houses 19 large pieces of vintage apparatus, the result of many years of collecting, preserving, rejuvenating, repairing and pampering.

One of the museum's major attractions is a 1904 American LaFrance steamer from the Greensboro, North Carolina, Fire Department. The pumper was able to get up live steam in three minutes which is almost as fast as my editor's temper when I miss a deadline.

Vince has out-Smithsonianed the Washington institute by acquiring an 1852 Hunneman hand pumper from some place north of the Mason-Dixon line called Exeter, New Hampshire. This hand-drawn rig is two years older than the one on display at the Smithsonian and this fact no doubt makes the institute very envious.

In addition to the 19 pieces of apparatus, Vince has hundreds of smaller items in his collection: helmets by the dozens (several 100 years old), belts, uniforms, trumpets, bells, badges, telephones and just about everything else you'd find in an oldtime firehouse, excepting of course a checkerboard.

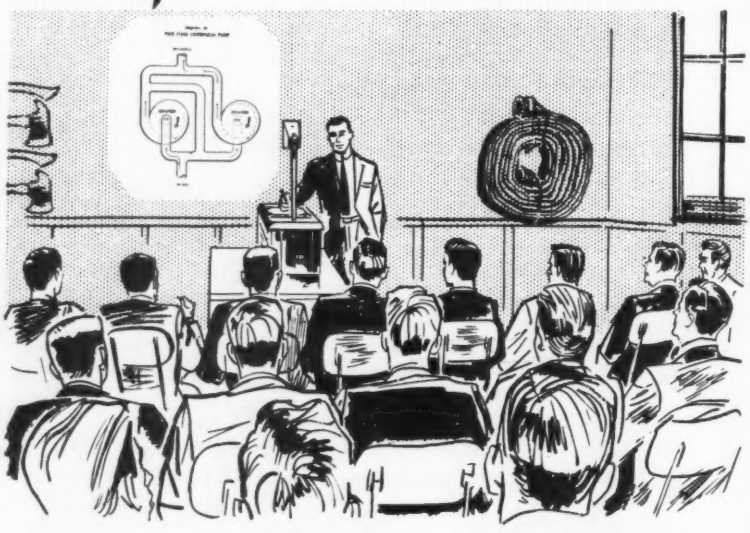
Moreover, two display rooms are filled with other bits of fire lore in addition to the main exhibit hall. The pictures that Vince sent me show his Beautiful Bride smiling pleasantly, though from experience I'll wager this grin vanishes when she wields the dustcloth.

I'm told that this is the largest fire museum in the country and one that no buff or chief will want to miss while in Florida. Donations to help Vince's historical work will be accepted.

I might note in passing that it is a sad commentary that buffs such as Vincent O'Meara have themselves had to preserve some of the colorful lore of a bygone era. Too many of our departments have seen fit to discard such relics and other historical material, while many buffs so often shunned by chiefs have had to preserve this material on a catch-as-catch-can basis.

This morning's mail brought a sample packet of matches from John Lee Turner, illustrious secretary of the Friendship Fire Association of Washington, D. C. This pioneering buff organization has come up with an interesting idea in these book matches. Printed in red and white and plainly identified, the back cover says: "The best coffee in town," and on the inside cover: "Our coffee is so good we always drink it ourselves." A good public relations gesture for the association while on canteen duty at fires. It is my understanding, however, that careless smoking and ditto discarded matches have caused a few fires here and there. But I still

Every Fire House a Fire School



A new and scientific method to speed up effective training in modern firemanship.

Suitable for any size group, from a volunteer squad to the largest fire company.

With a Visual Cast projector, used in any lighted space, our newly developed series of transparencies are fast replacing antiquated methods of teaching in the fire profession. Any plain painted wall can serve as a screen.

Transparencies are multicolored in brilliant, transparent inks. Subject matter is kept constantly up to date to conform with latest proven practices. Subjects now available: *Series 1,* Basic (Structural) Firefighting, in ten parts: Tools and Appliances; Fire Extinguishers; Firefighting Knots; Forcible Entry; Ventilation; Hoses; Ladders; Salvage; Theory of Firefighting; Firefighting Tactics. *Series 2,* Aircraft Firefighting and Rescue (in 7 parts).

Additional series are available on Pumps; Effective Streams; Radio Fire Communications; Indirect Method of Extinguishing Interior Fires. Now in development for future issue are: Fire Prevention; First Aid; Forest Firefighting. Others now in development.

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Washington 7, D. C.

Please send FREE folder to:

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MIAMI GETTING SET

Word comes from Fire Chief Newton Wheeler of the Miami, Fla., Fire Department that the welcome mat is being dusted off for the nation's fire chiefs—in fact, for heads of the fire forces of all nations.

The Headquarters Office of the International Association of Fire Chiefs reports advance registrations for Miami and Miami Beach hotels have hit a new high. So, too, have reservations for exhibits. Already, nearly all the exhibit space has been sold out.

Finally, the Program Committee Chairman, Chief Raul Gandara of Puerto Rico, has completed tentative plans for a rousing program that will permit time to (a) get the most out of the richly seasoned technical sessions of the conference; (b) benefit by unhurried contact with the exhibits of the leading manufacturers and distributors of fire fighting apparatus and equipment; and (c) enjoy the sights and delights of Miami.

think the Friendship boys have a uniquely good idea.

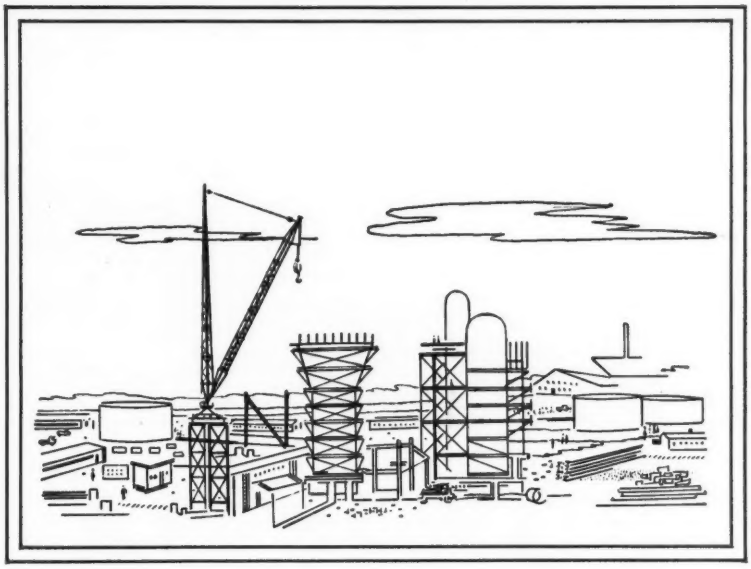
The mail also brought an elegantly printed souvenir program of the Fourth Annual Convention of the International Fire Buff Associates hosted by the Bell and Siren Club, Inc., of Newark, New Jersey. The book was graciously sent by Fred J. Bissinger, Jr., the textile tycoon.

The program carries a picture of Jim Kirkley, 1955-1956 president of the group, and when I saw Jim my mind went back to a sultry afternoon along Sheridan Road in Chicago when a brisk working fire broke out in a working girls' home. Jim lived nearby, so he was on hand when I arrived.

The hot afternoon had found many of the young beauties sunbathing and they rushed into the street in various forms of undress. There was an ugly rumor afoot at the time that the 2-11 was pulled only to allow firemen to enjoy the view, though I am inclined to discount this as idle propaganda put out by the Chicago police who blasted into the area with a Plan 2 assignment of squad cars.

In any event I covered the fire for the City Press, though I was off duty at the time, then adjourned to a coed's apartment nearby for refreshments. I never learned where Jim disappeared to when the fire was struck out. I was late that night for my first date with a French brunette. I married her several months later and haven't been to a fire since. I did not see Jim again until I opened the program and saw his picture.

On that sorry note we'll strike it out again until next month. The address remains the same: 419 Napoleon Street, Playa del Rey, California.



With new construction...

NEW FIRE HAZARDS?

Additional industrial construction and new production processes often bring new problems of control of fire in flammable liquids. If this is true in a plant that you are now planning or building, it will pay you to

GET UP-TO-THE-MINUTE INFORMATION ON FOAM FIRE-FIGHTING TECHNIQUES FROM YOUR NATIONAL FOAM REPRESENTATIVE

Our men are specialists in the protection of flammable liquids. Perhaps, in working with other National Foam users, they've already solved problems similar to those you face in your construction plans. Write for the name and address of your nearest National Foam representative or distributor.

NATIONAL FOAM SYSTEM, Inc.
West Chester, Pa.

Specializing exclusively in engineered foam systems, portable units, and a complete line of fire-fighting foam products.

What's Burning?

THE FOLLOWING LIST includes fires of $10,000 and over in the United States and Canada for the period from June 22nd to July 22nd.

Montgomery, Ala.—Sawmill shed at J. W. Wells Lumber Co. destroyed.

Delhi, Cal.—Restaurant, theatre and dwelling damaged.

Eureka, Cal.—Warehouse and offices of Eureka Lumber Co. destroyed.

Long Beach, Cal.—Hardware store in building at 5075 Long Beach Boulevard, damaged.

Los Angeles, Cal.—G. P. Proctor & Co. furniture plant; Sanitary Bottling Co.; Piuma Tower; Equipment Parts Co.; Liberty Bail Bond Agency Building and two tenement buildings, destroyed.

Los Angeles, Cal.—Ettinger Publicity Building, Pupi's French Pastry and Bakery, Robert Hanley Specialty Gift Shop, Karoly's Antique Shop destroyed; decorating business damaged.

Los Angeles, Cal.—Former Pacific Electric Railway car barns destroyed.

Napa, Cal.—Shell Oil Co. plant and nearby garage damaged.

Denver, Colo.—Tire recapping plant of Capitol Rubber & Tire Co. damaged.

Hazlehurst, Ga.—Building housing Fisher Ford Co. agency destroyed.

Savannah Beach, Ga.—Surf Club destroyed.

Villa Rica, Ga.—Golden City Hosiery Mill damaged.

Chicago, Ill.—Building housing Ben W. Turick & Co., suppliers of wiping cloths, and Taylor Industrial Laundry, damaged.

East St. Louis, Ill.—Warehouse and office building of Schmidt Roofing and Siding Co. destroyed.

Maywood, Ill.—William Supply & Furnace Co. and Bahcall Hardware Co. destroyed.

Park Ridge, Ill.—Building housing music shop, candy store, restaurant and tea garden, damaged.

Springfield, Ill.—Eisner-Fisher Grocery Co., mail order catalog office; W. T. Grant department store; bakery; Thompson's Restaurant and Thrifty Drug Inc., damaged.

Carbon, Ind.—Ayer-McCarel Clay Co. power plant damaged. Lightning.

Clay City, Ind.—Clay City Frozen Food Locker Co. plant damaged. Explosion.

New Brunswick, Ind.—Barn on Mrs. Lola Randle farm destroyed.

Elkhart, Ia.—Barn and two corn cribs on Tom Conroy farm, five miles east, destroyed.

Humboldt, Ia.—Main building of J. F. Anderson Lumber Co. and Lindhart Chevrolet Co. garage destroyed.

Kingsley, Ia.—Kingsley Lumber Co. and plant destroyed; adjoining News-Times building damaged.

Guthrie, Ky.—Covington Seed & Grain Co. destroyed.

Louisville, Ky.—Jesse Shook Poultry and Beer Depot destroyed.

Elkton, Md.—Foam rubber goods building of Bayshore Industries destroyed.

Salisbury, Md.—Parkway Motors Auto Agency damaged.

Newton, Mass.—Electronics plant of Pickard & Burs damaged.

Sterling, Mass.—El Rancho Grande, night club, Route 12, destroyed.

Magnolia, Miss.—Magnolia Oil Mill plant destroyed.

Waveland, Miss.—Office building housing William Stanton Collection Agency and Conservation Service office, destroyed.

University City, Mo.—E. M. Stivers, Inc., auto agency, damaged.

Aurora, Neb.—High school destroyed.

East Paterson, N. J.—Del Roy's Speed Parts, Route 46, damaged.

Kearny, N. J.—Kearny Terminal Corp. warehouse destroyed.

Patterson, N. J.—Corbal Industries plastics plant destroyed.

Totowa, N. J.—Two Guys from Harrison store on Route 46 destroyed.

West Orange, N. J.—Clubhouse on West Orange Public Golf Course damaged.

Binghamton, N. Y.—Empire Lumber Co. damaged.

Ellenville, N. Y.—Bakery, toy store and sports shop in business district destroyed.

Newcomb, N. Y.—Planing and veneer mills of Eaton Hardwood Mill, four miles southeast, destroyed.

New York, N. Y.—Old Wanamaker Building being demolished, destroyed.

Clinton, N. C.—Underwood Milling Co. plant damaged.

Edenton, N. C.—Main shop and warehouse of M. G. Brown Lumber Co. destroyed.

Warrenton, N. C.—Country home of Dr. M. Hazel Colvin, Route 667, 12 miles southeast, destroyed. Gas fumes.

Cincinnati, Ohio—Ten stores and dwellings destroyed or damaged. Overturned gasoline transport trailer exploded.

Zanesville, Ohio—Rittberger Bros. meat packing plant damaged. Defective wiring.

Astoria, Ore.—Cumming Apartment House and Bond Hotel destroyed.

Dallas, Ore.—Western Logging Co. camp trucks and buildings destroyed. Spontaneous ignition.

Eugene, Ore.—Munnell and Sherill Supply Co., logging equipment manufacturers, damaged.

Eugene, Ore.—John Warren Hardware Co. destroyed.

LaGrande, Ore.—Oregon State Forestry warehouse destroyed.

Lakeview, Ore.—Lakeview Materials Co. destroyed.

Milwaukee, Ore.—Milwaukee Box & Veneer Co., contents and machinery, destroyed.

Portland, Ore.—Lopeland Lumber Co. destroyed.

Salem, Ore.—Lakewood Home destroyed.

Stayton, Ore.—Siegmund Lumber Mill destroyed.

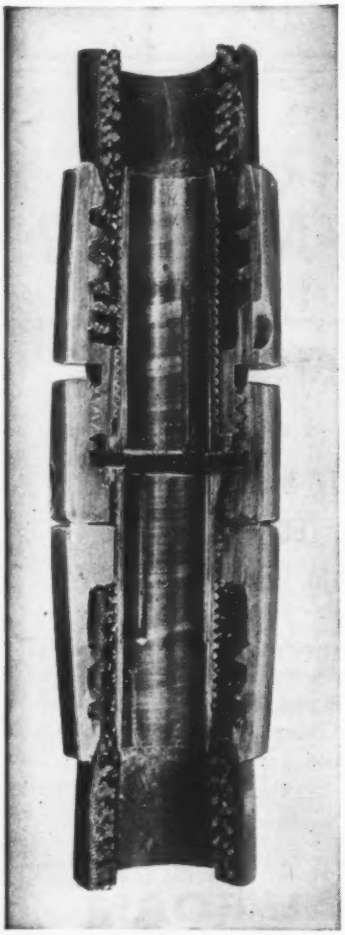
Wasco, Ore.—Sherman Hotel destroyed.

Butler, Pa.—The Barrel, night club, Route 68, damaged.

Lebanon, Pa.—Hanover Shoe Co. retail store damaged.

Lemoyne, Pa.—Five buildings at Otto and Hollinger Lumber Yard destroyed. Sparks from railroad locomotive.

McKeesport, Pa.—Menzie Dairy Co. garage destroyed.



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BAR-WAY BAR-WAY MFG. CO., STAMFORD, CONN.

Middletown, Pa.—Penbrook Candy Co. plant destroyed.
Norristown, Pa.—Anchor Wallpaper Co., seven miles north, destroyed.
Columbia, S. C.—South Carolina National Bank of Columbia damaged. Explosion.
Mullins, S. C.—Doxon's warehouses 1 and 2 and nearby dwelling destroyed.
West Columbia, S. C.—The Vest Mattress Co. damaged. Switch box blamed.
Chattanooga, Tenn.—Collegedale Wood Products Co., furniture plant on Southern Missionary College grounds, operated by College Industries, Inc., destroyed. Spray booth.
Jackson, Tenn.—Model Mill Flour Co. plant damaged.
Nashville, Tenn.—Reddy Brand Packers, Inc. destroyed.
Shelbyville, Tenn.—Millner's Super Market destroyed. Explosion.
Dallas, Tex.—Bell Cleaning and Laundry Co. damaged.
Houston, Tex.—Furniture Design Inc., factory building, damaged.
South Dallas, Tex.—Economy Lumber Co. destroyed; adjoining mattress firm owned by F. M. Barnes, damaged.
Staunton, Va.—Montgomery Ward & Co. warehouse damaged.
Bridgeport, Wash.—Cornehl Grain Elevator destroyed.
Seattle, Wash.—Materials Store, Inc. destroyed; Fiberlay, Inc., damaged. Incinerator sparks.
Vancouver, Wash. — Freighter Seasplendor, owned by Orion Shipping Co. damaged.
Liverpool, N. S.—Nickerson Bros., Ltd., cold storage processing and fish meal plants; pattern shop and foundry of Steel & Engine Products, Ltd., two fishing boats and warehouse destroyed.
Listowel, Ont.—Listowel Produce Co., Ideal Supply Co. and B & M Tire and Battery store damaged.
Montreal, Que.—Stable at Blue Bonnets Raceway and five horses owned by Laurent Bourgon destroyed.

N. E. CHIEFS MEET

Continued from page 674

England Fire Insurance Rating Association, Boston, moderated the session which closed with a barrage of questions fired at the panel.

Exhibitors have their innings

In keeping with tradition, Wednesday afternoon was devoted to the exhibitors and their showings, and the distribution of many prizes to delegates and their ladies.

Again, the banquet was a sellout, the diners overflowing the vast main dining hall. The guest speaker was His Excellency Robert E. Joyce, Auxiliary Bishop, Diocese of Vermont. Following the banquet there was dancing in the ballroom.

The final business session occupied all of Thursday, the most important item being the election of officers.

The slate adopted for the year 1957 is as follows: President, Chief Horace S. Jose, South Portland, Me.; First Vice President, Chief Thomas H. Slaman, Wellesley, Mass.; Second Vice President, Chief Clarence Green, Concord, N. H.; Secretary-Treasurer, former Chief John W. O'Hearn, Watertown, Mass.

Directors and State Vice Presidents named are: Chief John E. Keefe, Bellow Falls, Vt., immediate past president; former Chief Oliver T. Sanborn, Portland, Me.; Chief Guy L. Foss, Wolfeboro, N. H.; Chief Alfred Koltonski, Rutland, Vt.; Chief Bartholomew A. Curran, Scituate, Mass.; Former Chief A. J. Cote,

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Woonsocket, R. I.; Chief Francis J. Degan, East Hartford, Conn. Also reappointed by the incoming president were: Chief William J. Dooling, Hood Rubber Co., Watertown, Mass., Sergeant-at-Arms; Andrew A. Palmer, Woonsocket, R. I., press representative; J. Carroll, Brookline, Mass., Official Photographer, Chief Roi B. Woolley, Editor FIRE ENGINEERING, Technical Consultant, and Chaplains Michael F. Collins, Somerville, Mass., and John P. Fitzsimmons, Belmont, Mass.

The members voted unanimously to hold the 1957 meeting at the Hotel Wentworth, June 23, 24, 25 and 26, 1957.

Upon recommendation of the Resolutions Committee, Chief Henry Thomas, Chairman, the following resolutions were adopted:

Matching funds

WHEREAS, the matching funds program of the Federal Office of Civil Defense has been terminated, and

WHEREAS, the funds invested in this program for creating and strengthening the reserves in the nation's fire service have already produced, and are producing definite returns on an investment in the form of improved fire defense and enabling the fire service to meet the present and potential threat of destructive, devastating fire, and

WHEREAS, this matching fund program unforunately has been terminated at a critical period, when it is more important than ever before that the nation's fire protection forces be not only brought up to full strength but improved to provide for possible threat of enemy attack.

THEREFORE BE IT RESOLVED that this N. E. Association of Fire Chiefs in Conference this 28th day of June, 1956, urges that the Federal Government of the U. S. and the Federal Civil Defense Administration be urged to prepare an even more comprehensive program of matching funds for the Fire Service, and to effectuate such program at the earliest possible moment in the interest of national security and preservation of the nation's economy.

AND BE IT FURTHER RESOLVED: That the attached evidence in support of this program, in the information contained in the appended Editorial from FIRE ENGINEERING Magazine, be duly recorded in the annals of these Federal and other authorities.

Protection of Thruways

WHEREAS, the continuing extension of the thruways, speedways and other vital transportation arteries throughout the New England States, and the attendant traffic, both in volume and complexity, are producing ever-increasing hazards of fire, explosion with resulting threats to life and property, and

WHEREAS, these arteries are vital to the fire service to provide rapid, uninterrupted movement of fire fighting facilities from where they may be located to where they may be needed in time of major disaster, including enemy attack.

THEREFORE BE IT RESOLVED, that the N. E. Association in conference this 28th day of June, 1956, does hereby petition the authorities of the States concerned in this important development to consult with the fire services in the respective States for immediate study and conference to the end that suitable effective programs may be established to protect life and property, and meet present and future emergencies arising from this situation.

N.Y.U. to Give Course in Fire Prevention Inspection

The Center for Safety Education, Division of General Education, New York University, is offering a course in Fire Prevention and Protection Inspection (designated SC-8) on Thursday evenings from 6:15 to 8 p.m., from September 27 to January 17. The course will be conducted by Gilbert E. Stecher of the Greater New York Safety Council.

Students may register for the course by mail or in person from 12 noon to 7 p.m. from September 17 to September 28, Monday through Friday, or on Saturday, September 22, from 9:30 a.m. to 1 p.m. The fee for the course is $30.00 plus a registration fee of $3.00.

For further information, write the Center for Safety Education, New York University, Room 42, 6 Washington Square North, New York 3, N. Y.

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Schools and Conferences

Aug. 20-24—**Tennessee State Fire Service School.** Annual meeting, Mid-Tennessee State College, Murfreesboro, Tenn. Director, S. Elkins, Fire Department Instructor, State Board for Vocational Education, 215 Chestnut Street, Chattanooga, Tenn.

Aug. 21-24—**Pacific Coast Inter-Mountain Association of Fire Chiefs.** Annual meeting, Sacramento, Cal. Secretary-Treasurer, Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

Aug. 22-25—**Montana State Firemen's Association.** Annual fire school, Polson, Mont. For information contact Chief Clayton Brown, Polson Volunteer Fire Department, Polson, Mont.

Aug. 25-27, Aug. 29-31, Sept. 8-10—**Nebraska Fire School**—Series of three-day schools for pump operators, to be held at Nebraska Fire Service Training Center, Municipal Airport Grounds, Grand Island, Neb. For information, contact Russell D. Salak, Secretary, Nebraska Fire Chiefs Association, Box 312, Schuyler, Neb.

Aug. 26-28—**New York State Permanent Firemen's Association.** Annual meeting, Seneca Falls, N. Y. Secretary-Treasurer, Robert E. Mills, 420 Plymouth Drive, Syracuse 6, N. Y.

Aug. 27-31—**Western Pennsylvania Fire School.** Annual regional school, California, Pa. Secretary, J. A. Silbaugh, c/o Fire Department, Uniontown, Pa.

Aug. 30-Sept. 1—**West Virginia State Firemen's Association.** Annual meeting, Hinton, W. Va. For information, contact S. H. Boland, Chief of Fire Department, Hinton, W. Va.

Sept. 3-4—**Georgia State Fire College—Inspectors' Course,** to be held at #7 Fire Station, Atlanta, Ga. Director, Harry Phillips, 46 Courtland Street, S. E., Atlanta 3, Ga.

Sept. 4—**Morris County Fire School,** to be held at 8 p.m. at Lincoln School, Rockaway, N. J. For information, contact Robert H. Wright, Publicity Committee, Long Hill Lane, Chatham, N. J.

Sept. 4-7—**Maryland Short Course for Firemen.** Annual meeting, University of Maryland, College Park, Md. Director, Robert C. Byrus, Director of Fire Service Extension, Box 85, University of Maryland, College Park, Md.

September 9—**Southern Wisconsin and Northern Illinois Firemen's Association.** Annual school, Savanna Ordnance Depot, Savanna, Ill. For further information, write program secretary.

Sept. 10-13—**Canadian Association of Fire Chiefs.** Annual meeting, Vancouver, B. C. Secretary-Treasurer Chief Allen Clark, Box 456, Lakefield, Ont.

Sept. 10-14, Oct. 22-26—**Pennsylvania Fire School**—Operation and Maintenance Fire Apparatus Course, to be held at Lewistown, Pa. Director, Arthur Espey, Box 631, Lewistown, Pa.

Sept. 10-14—**Ohio State Fire School and Arson School.** Annual meeting, Ohio State University Campus, Columbus, Ohio. Director, Dr. Harvey Walker, Ohio State University, Columbus, Ohio; Co-Director, Wayne Jenkins, Chief of Fire Prevention, State Fire Marshals' Office, Wyandotte Building, Columbus, Ohio.

Sept. 10-14—**Virginia State Fire School.** Annual meeting, Norfolk, Va. Director, Clay A. Easterly, Fire Marshal, P. O. Box 1112, Martinsville, Va.

Sept. 11-14—**Indiana State Fire School.** Annual meeting, Purdue University, Lafayette, Ind. Director, Professor Shelby Gallien, Public Safety Institute, Purdue University, West Lafayette, Ind.

Sept. 14-15—**Piedmont Fire Safety Seminar.** Annual meeting, Winston-Salem, N. C. Chairman, W. G. Dunham, c/o Winston-Salem Chamber of Commerce, Winston-Salem, N. C.

Sept. 14-15—**Jefferson County Volunteer Firemen's Association.** Annual convention and tournament, Dexter, N. Y. Secretary, Lewis Z. Horr, Great Bend, N. Y. Chairman, Chief Ralph Lamon, Fire Headquarters, Dexter, N. Y.

Sept. 15-16 and Sept. 22—**Alert Firemen's Fire Training School.** For information, contact Chief Clayton Quenby, Holt, Mich., Director of the school.

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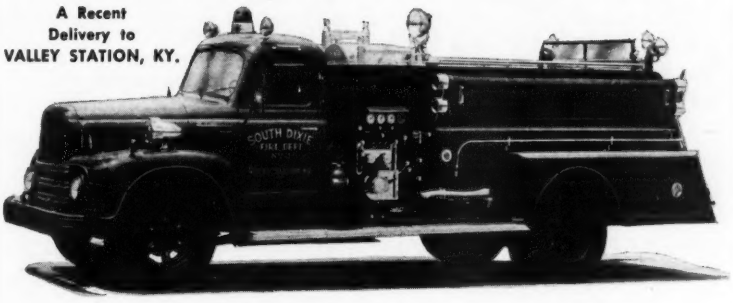

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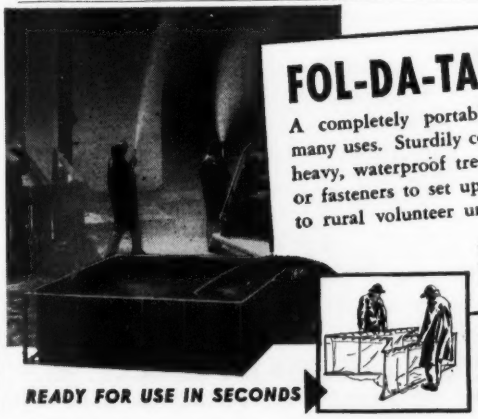

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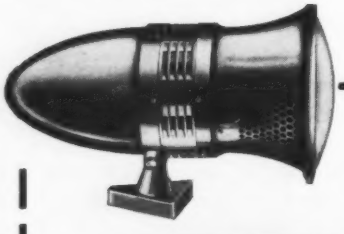

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Schools and Conferences

Sept. 16—**Nebraska State Fire School.** Regional meeting, Imperial, Neb. Director, Otto B. Johannes, 2604 - 12th Street, Columbus, Neb.

Sept. 17-18—**New Hampshire Fire Chiefs' Club.** Annual training school, Grenier Air Force Base, Manchester, N. H. For information, write Chief Robert Douglas, Base Fire Department, Grenier Air Force Base, Manchester, N. H.

Sept. 17-20—**International Municipal Signal Association.** Annual meeting, Denver, Colo. Secretary, Irvin Schulsinger, 130 West 42nd Street, New York 36, N. Y.

Sept. 18-19—**Iowa Firemen's Association.** Annual meeting, Red Oak, Ia. Secretary-Treasurer, Carl H. Fuchs, 2749 Kinsey Avenue, Des Moines, Ia.

Sept. 20-22—**Westchester County Volunteer Firemen's Association.** Annual meeting and parade, North Tarrytown, N. Y. Secretary, John R. Bailey, Box 1, Baldwin Place, N. Y.

Sept. 25-28—**Michigan Fire Inspectors Conference.** Annual meeting, Michigan State University, East Lansing, Mich. Secretary-Treasurer, Michigan Fire Inspectors Society, c/o 33110 Five Mile Road, Livonia, Mich.

Sept. 26-27—**Maryland Fire Brigades Association.** Annual meeting, Towson, Md. For information, contact Chief A. P. Orban, Baltimore County Fire Department, Towson 4, Md.

Sept. 27-30—**Berks County Fire Training School.** Annual meeting, Wyomissing, Pa. Secretary-Treasurer, Adam Ed. Baer, Jr., 373 Sunset Road, West Reading, Pa.

Sept. 30—**Nebraska State Fire School.** Regional meeting, Atkinson, Neb. Director, Otto B. Johannes, 2604 - 12th Street, Columbus, Neb.

Oct. 2—**Morris County Fire School,** to be held 8 p.m. at Dover High School, Dover, N. J. For information, contact Robert H. Wright, Publicity Committee, Long Hill Lane, Chatham, N. J.

Oct. 4-6—**Ohio Fire Chiefs' Association.** Annual meeting, Hamilton, Ohio. General Chairman, Chief George Schlotterbeck, Fire Headquarters, Hamilton, Ohio.

Oct. 6-7—**Erie County, Pa., Firemen's Association and American Firemen's Association.** Joint meeting, Erie, Pa. For information, contact Lieutenant Dale Hogg, Secretary, American Firemen's Association, c/o Division of Fire, 5301 Mayfield Road, Lyndhurst, Ohio.

Oct. 8-9—**Georgia State Fire College—Fire Engineers' Course,** to be held at #7 Fire Station, Atlanta, Ga. Director, Harry Phillips, 46 Courtland Street, S. E., Atlanta 3, Ga.

Oct. 15-18—**Kansas Fire School.** Annual meeting, University of Kansas, Lawrence, Kans. Director, Clyde A. Babb, 111 Fraser Hall, University of Kansas, Lawrence, Kans.

Oct. 22-26—**National Safety Council.** Annual Safety Congress and Exposition, Chicago, Ill. For further information write R. L. Forney, Secretary, National Safety Council, 425 N. Michigan Avenue, Chicago 11, Ill.

Oct. 23-25—**Illinois Firemen's Association.** Annual meeting, Springfield, Ill. Secretary, Roy W. Alsip, Box 8, Champaign, Ill.

Oct. 24-26 (tentative)—**Arizona State Fire Training School.** Annual meeting, Phoenix, Ariz. Director, Battalion Chief Jake Siken, Fire Fighting Instruction Supervisor, 49 South 1st Street, Phoenix, Ariz.

Nov. 2-3—**International Rescue and First Aid Association.** Annual meeting, Toledo, Ohio. For information, write Max Spray, 201 South Washington Street, Alexandria, Va.

November 3—**Keystone State Fire Chiefs Association.** Fall meeting, Mt. Pocono Fire Station, Mt. Pocono, Pa. For information, contact Lewis M. Atkinson, Recording Secretary, Malvern, Pa.

November 11—**Great Lakes Division, International Association of Fire Chiefs.** Annual meeting, Hotel Alcazar, Miami, Fla. Secretary-Treasurer, Chief Elmer Stough, 605—4th Street, Lorain, Ohio.

Nov. 12-16—**International Association of Fire Chiefs.** Annual meeting, Miami, Fla. Secretary-Manager, B. Richter Townsend, Hotel Martinique, Broadway at 32nd Street, New York 1, N. Y.

World-Wide Fire News

Military Calls Civil Defense Civilian Job

The military wants no part of civilian defense, according to Pentagon pronouncements which state the Defense Department and Joint Chiefs of Staff would fight any attempt to saddle them with that additional responsibility.

Originally the military made a strong bid to take over civil defense. In 1948 the Hopley report called for 15 million workers, controlled and directed by a strong Office of Civil Defense in the Pentagon. It urged mobile battalions and proposed martial law as the final and logical development of a civil defense plan.

Public outcry however, forced President Truman to scrap the idea and transfer the Office of Civil Defense Planning from the Defense Department to the old National Security Resources Board. Still later, an all-civilian Federal Civil Defense Administration was set up. Even then, however, the military did not completely relinquish the idea of control.

Today, civil defense has no part in the Pentagon's plans for an atomic war, according to news reports. The Pentagon's thinking reports say, boils down to these words of a Joint Chiefs of Staff planning officer: *If I were a Russian and knew I could pin down a large part of the American forces on police duty, I'd do it. As a soldier, I can see but one course—take our casualties and strike back.*

The same day these reports were made public, announcement was made of the awarding of two contracts for research to determine the best civil defense warning system for use in event of enemy attack.

The contracts, totaling $63,575, it is said, were awarded to Armour Research Foundation by the F.C.D.A. Research will be concerned with the use of power lines and telephone systems to transmit warning signals.

Meanwhile, some areas throughout the country are all at sea over the June revisions in warning signals whereby an "Alert Signal" of three minutes duration by "sirens, horns or whistles" is introduced, followed by a "Take Cover Signal" of the same three minutes duration. What this revision will do to fire alarm signal alerting systems which are used to sound both fire alarms and civil defense alerts has the fire service worried.

From the World News Ticker

Members of the Milwaukee Ground Observer Corps, sharpening their eyes for spotting airplanes, spotted a fire. They called the fire department via the sheriff's office, but by the time the brothers reached the scene, a farm building, it was too late. . . . London, England, firemen have been warned against "tele-

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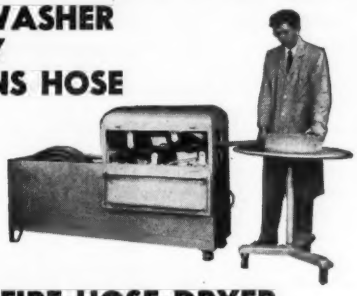
NEW ROTO-JET HOSE WASHER AUTOMATICALLY WASHES—RINSES—DRAINS HOSE

ROTO-JET Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple one man operation. With or without detergents ashes, dirt, mud and sludge are automatically scrubbed out and flushed away. Saves time. Lengthens hose life.



FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life. No other drying method is so fast—so economical—so easy to use. Circul-Air is the preferred drying method in over 3,000 leading Fire Departments.

ACCEPTED—APPROVED RECOMMENDED

Approved by Underwriters' Laboratories . . . and Canadian Standards Association. Recommended by all leading fire hose manufacturers.

UL LABORATORIES APPROVED SA

PORTO-RAK HOSE STORAGE and LOADING UNIT

Saves valuable space. Holds 1800 ft. of 2½" hose—proportionately more of 1½"—in an 8 ft. space (when loading table is detached). Roll it right up to the truck for complete hose reload—out of the way when not in use. Equipped with locking fiber wheeled casters.

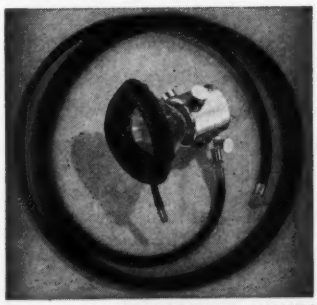
WRITE FOR NEW LITERATURE

If you are planning to build or remodel, send for our brochure "Fire Station Design."

THE CIRCUL-AIR CORPORATION 575 EAST MILWAUKEE DETROIT 2, MICHIGAN

TREAT MORE PATIENTS WITH YOUR E & J RESUSCITATOR

by adding



E&J

MICRO EXTENSION UNITS

Complete, independent resuscitation-inhalation treatment for two- or three-patient emergencies. Write for details.

E & J MANUFACTURING COMPANY, 100 E. Graham Pl., Burbank, Calif.

logue," or addiction to television, in their weekly journal. It breeds "stay-at-home stick-in-the-muds," says the journal, "codfish eyes, lassitude and physical atrophy," it adds. Can it mean that they become so absorbed with TV they don't hear the bells? . . . In Brussels, Belgium, 13 firemen were injured when a Sunday fire destroyed a chemical factory. Fire fighters were burned by exploding chemicals. Entire factory was gutted and neighboring houses evacuated during 10-hour fight to extinguish flames. . . . Fire destroyed most of the exhibits in a Soviet textile exhibition at Cawnpore, capital of Uttar Pradesh earlier this summer. Cause of blaze was not given. . . . Major General Robert E. Condon, director of New York City Civil Defense, presented service ribbons and certificates of commendation to 100 New York auxiliary firemen who manned the 22 CD pumpers (with regular N. Y. C. personnel) that were dispatched to Danbury, Conn., during the October 16-18 floods. . . . In Sydney, Australia, firemen extinguished a fire on July 5 that had been going on for 16 hours on the top floors of the city's tallest building. Three floors occupied by a radio station were burned out. About 50 firemen were overcome and 26 of them hospitalized. . . . The crew of the freighter Wolverine State brought a fire under control that threatened the ship while en route to Honolulu. An SOS sent the Coast Guard cutter Klamath speeding toward the freighter, about 800 miles north of Honolulu. It turned back when the crew beat out the fire in the holds. . . . Madrid, Spain, firemen removed 15 bodies July 2 from the wreckage of an apartment house that collapsed after it had been weakened by a fire. About 40 others were injured; one person still missing. . . . Fire swept a boiler room of the 10,000-ton transport Martha Klepps after a welding unit exploded. West New York firemen fought the fire which started after an explosion while the ship was docked at Pier 9 that port. Blast occurred while a cargo of bauxite ore was being unloaded from ship's hold. . . . Late dispatch tells about an explosion in a Felixstowe, England, gas plant that killed two workmen. . . . Also, a delayed report from Tokyo details explosion in a fireworks plant that killed one woman, injured six others in Toyo-hashi. . . . Abaca, the raw material for making manila rope makes a stubborn fire but the crew of the Norwegian freighter Lovland, bound from Cortez, Honduras, to Jacksonville, Fla., brought such a fire under control before rescue vessels could answer ship's SOS call. . . . Believe it or not: Fire broke out in a freight car parked at a railroad siding in St. Etienne, France, and before fireman could get to the scene the fire was out, literally drowned by the contents of the freight car, 1000 bottles of mineral water! . . . Youngsters at Fort Lee, Va., were found recently playing with a Civil War cannon ball. Said it was a "toy," but officers carried the "toy" to the post's range officer and an ordnance disposal specialist cracked it open with an explosive charge. Inside were gunpowder and grapeshot. "Toy" was finally blown up with a larger charge.

SENSIBLE

FOR ALL YOUR HOSE CONNECTIONS

SENSIBLE LUG COUPLINGS

meet

GOVERNMENT SPECIFICATIONS

PLATE 159. Sensible Lug Couplings (Rocker Lug Type) are designed to glide over obstacles with no sharp edges to cut or damage hose. Made of high grade bronze. Our full 64 years experience are represented in this modern and dependable piece of equipment—SPECIFY "SENSIBLE."

POWHATAN BRASS *and* IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town West Virginia
Established 1892

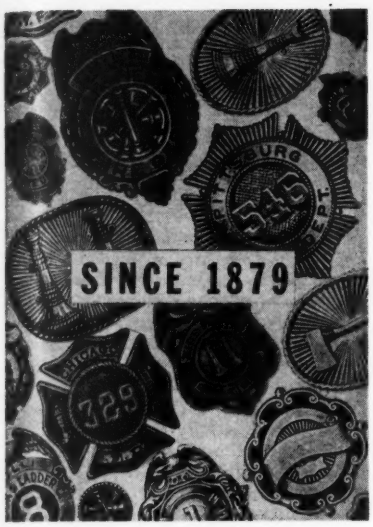
More Power to the Governor's Island Fire Dept.

The "World Wide Fire News" department for June, 1956, carried an item concerning a fire at First Army Headquarters, Governor's Island, N. Y. Due to misinformation it would appear that a full-time fire department is not maintained at this post.

Quite the contrary is true, as a 13-member civilian-manned fire department operates two 750 gpm pumpers under Chief John J. West. The men are members of the Federal Fire Fighters Assn., IAFF, and Captain Ralph Marshall is president of Local #1.

As stated in the release, assistance is received on call from the New York Fire Department under an agreement between the Army post and the City.

FIRE ENGINEERING regrets any embarrassment it may have caused this department in reporting the incident, and wishes to thank Chief West, Past President Pat Hanlon, FFA, and H. R. Henry, Fire Protection Engineer, for bringing the matter to our attention. Mr. Henry corrects us by pointing out that the fire was not in a wooden barracks but in a building of generally fire-resistant construction built in 1929.



BRAXMAR BADGES

Since 1879

Firemen the world over rely on Braxmar for the finest badges money can buy. We offer the widest possible selection in nickel, chrome plate, sterling silver, gold plate, rolled gold and solid gold; all of our badges and insignia are the work of experts with a lifetime of service.

Write for latest catalog and price list.

Dealer inquiries invited.

THE C. G. BRAXMAR CO., INC.

216 East 45th Street

New York 17, New York

President Approves FCDA Appropriation

On June 27 President Eisenhower signed Public Law 623. This is the largest appropriation in the history of the Federal Civil Defense Administration and approximately $25 million more than the 1956 appropriation. The President has stated that the civil defense must be made stronger because of "spectacular developments in weapons and methods of delivery."

In a more recent letter to Val Peterson, head of the Federal Civil Defense Administration, the President said the Federal government must take over "a larger responsibility in our national plan of civil defense." Mr. Eisenhower asked Mr. Peterson to sit in on Cabinet meetings hereafter "to help insure that the civil defense program is fully integrated into our national planning." President Eisenhower added that he would ask Congress in January to amend the six-year-old Civil Defense Act to bring it up to date.

The new appropriation provides:

Emergency Supplies and Equipment	$47,000,000
Contributions	17,000,000
Surveys, Plans and Research	10,000,000
Civil Defense Expenses of Other Federal Agencies	4,000,000
Operations	15,560,000
Total	$93,560,000

Votive Candle Burns Girl

Laboratory tests were ordered made of a fabric worn by a 16-year-old girl, after she had suffered severe burns on June 16 last, when her clothing became ignited, it is said, by a votive candle at the Roman Catholic Church of St. Joan of Arc, New York City.

The girl, Alice Schroder, was wearing a peach-colored flared skirt and black blouse bought only a few days before. She and her mother were standing about two feet from the votive candles, and near an open window. In some unexplained manner the girl's clothing burst into flames. Other members of the congregation pulled the garments from her body and beat out the fire. A private car took her to the hospital.

After an anonymous telephone caller later notified the fire department, Fire Commissioner Edward F. Cavanagh, Jr., directed Martin Scott, Chief Fire Marshal, to have tests made of the fabrics.

Floor Collapse Kills Spokane Fire Captain

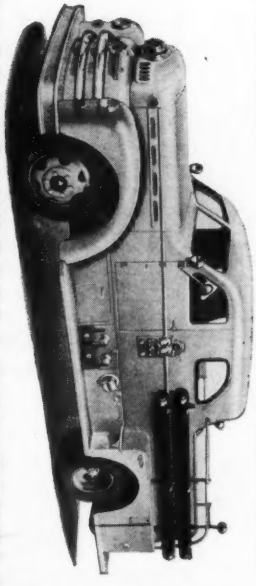
Captain Leonard W. Doyle of the Spokane, Wash., Fire Department, lost his life on June 2, while fighting a business block basement fire. Floor joists, weakened by the fire, gave way, dropping Captain Doyle and six firemen to the basement. The six men were rescued from beneath a pile of merchandise and concrete flooring, but Captain Doyle was pinned under a 4400-pound office safe.

IT'S ALL SEAGRAVE

THE GREATEST NAME IN FIRE APPARATUS

The Nation's Most Dependable Pumping Engine

- Seagrave Built V-12 Engines
- Seagrave Built Centrifugal Pumps
- Seagrave Built All-Steel Bodies
- Seagrave Built Safety Frames
- Seagrave Built Canopy Cabs
- Seagrave Built Ladders
- And Other Principal Parts of Seagrave Design and Construction



THE SEAGRAVE CORPORATION
Columbus, Ohio

THE WATCH DESK

overhauling the firemanic news of the day

Boston "Goes Hollywood"

Many strange things happen in Hollywood, but folks out along famous Restaurant Row in West Hollywood were really amazed recently when during a small fire a rig arrived bearing the lettering "BOSTON FIRE DEPARTMENT."

Actually, it was Engine 108 of the Los Angeles County Fire Department, a 1929 model pumper which was being used for a television film on the Cocoanut Grove Fire in Boston.

The name had been painted on the hood with water paint and L. A. County carefully painted out—also with water paint—just for the film.

Off-duty county personnel had manned the rig during the filming which brought Assistant Chief Edward N. Montgomery from the Boston Fire Department with technical advice.

One fireman from another company remarked after seeing the old pumper at the fire, *We're sure getting some long move-ups nowadays.*

Cliff Dektar

Chicken Every Sunday—or Else

Joseph Hilton of New Orleans, La., recently told police of that city that he liked chicken on Sunday. His peeve was that friends appeared so regularly at his house for the Sabbath dinner that as a result he seldom found enough left for his own meal.

After brooding about this problem he decided the best way to cure the trouble was to set fire to his house. Ordering Mrs. Hilton and the children out of doors, Hilton unsuccessfully tried to start three separate fires in the children's room, kitchen and bathroom. His irate and frightened wife called the police who booked Hilton for investigation of aggravated arson.

Hot Fire in Chili Factory

Fire fighters of La Junta, Colo., were seasoned to anything but their taste last March when called upon to battle a peppery blaze in the Scaff Bros. chili products plant that city.

The temperature outside was about zero, but inside it was anything but. The fire apparently started in the processing room of the plant which makes F & J products; it gutted the kitchen and damaged the office and warehouse sections.

Fire fighters under Fire Chief Jack Foller, who lugged their lines into the interior to battle the blaze at close range, were sprayed with exploding quantities of cayenne pepper, garlic and other spices. The pepper burns were so severe that hosemen had to turn the hose on themselves to ease the fiery results.

The pesky, smoky, toxic fire was brought under control after a four-hour struggle. Fortunately none of the fire fighters was injured seriously from the contaminants.

Salem Has "Delayed All-Out" 42 Years Tardy

You've heard about "delayed alarms" but how about "delayed *all-outs*"?

Back on June 25, 1914, it is recorded that a conflagration leveled half of the City of Salem, Mass., leaving 18,000 persons homeless and destroying property valued at $14 million.

History also records, according to researchers who dug up the records that in the confusion following the disaster nobody ever sounded the recall, signifying "all out."

Recently, during ceremonies held in connection with the termination of the huge loan advanced to the city by the State after the fire to enable the Salemites to get back on their feet, Mayor Francis X. Collins touched a match to the last $1,000 note and then pulled fateful Box 48, the "conflagration box" in the heart of the industrial section, to summon the fire department to the "blaze" and at the

"HOW shall I know the leader in the race?" asked the young Fire Scientist

"EASY" quoth the wise old Fire Chief

"Find him who is the target of comment by other runners—HE will be the leader"

★ ★ ★

BLAZE GUARD MFG. CO.

NORTH BERGEN, NEW JERSEY

FRESH CUSTOM-BUILT FIRE HOSE

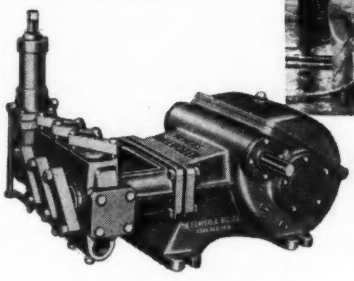
same time to proclaim to all and sundry the good news that Salem was free of the State debt.

Before leaving the banquet which climaxed the celebration, Fire Chief William B. Hart brought the ancient records up to date, and officially ended the 1914 conflagration by sending in the "all-out" from the box.

Hot Off the Tape

In Peoria, Ill., Assistant Fire Chief Rudy Kneer radioed a police dispatcher to check the owner of Woo's Laundry and ask him to open the door. The firemen had answered an alarm at the laundry address and wanted to get into see if the place was O.K. "Who's Laundry?" asked dispatcher Roy King. "That's right," Kneer replied. King consulted a city directory. . . . What next! In Worcester, Mass., a 17-year-old youth was arraigned for assault with a dangerous weapon. Seems he filled his mouth with lighter fluid, blew the stuff through a lighted match, severely burning a companion. His imitation of a flame thrower goofed. . . . Believe it or not, Ripley formerly lived in Mamaroneck, N. Y. If alive, he would appreciate this one: Mrs. John W. Grainger of Mamaroneck Village is about the only woman in America who can boast of having two chiefs in her family. Her husband was elected chief of Mamaroneck Village Fire Department last April. One the same day her father, Lud Okon, attained a similar honor when he was named chief of the neighboring Harrison, N. Y., Fire Department. . . . In Abbeville, S. C., exploding bullets served as a fire alarm that saved Mr. and Mrs. Joe Able and their three children when their home caught fire. The explosion of the bullets, stored in a closet, awakened Mrs. Able and she roused the others. . . . It is reported that in Weymouth, Mass., a lightning bolt on July 11, 1955, started a fire that destroyed a light fixture and set fire to a nearby bed. During a similar storm on July 13, 1956, another bolt did the same thing, destroying the replaced fixture and the replaced bed. . . . Cheers for Hohokus. In that town, Edwin W. Bohne, of Pascack Road, Woodcliff Lake, N. J., was charged with failure to give a fire truck the right of way and with careless driving and fined $5 and $3 and costs on both charges. Driver of the fire truck was complainant in the first instance and a patrolman in the second. . . . Firemen of Lafayette, Ind., received the following explanation for the cause of a home fire! Heat from an electric kitchen range caused a plastic pot hook above the stove to melt. A pan lid hanging from the hook dropped on the stove. The lid struck a frying pan full of grease. The grease spattered on the wall and caught fire. Now you tell one! . . . Fate played "Pop Goes the Weasel" with Fire Chief Peter Butts, Van Etten, N. Y., recently. The chief reached into the fire house refrigerator for a bottle of soda pop during a thunderstorm. At that instant lightning struck the station and shattered the bottle in the chief's hand. Butts wasn't hurt, but he says he felt kinda numb for a while.

If it's fog you need...



Some fires can be brought under control more quickly with a cooling fog spray than with a high volume stream.

Many manufacturers of today's fire-fighting equipment install a Myers Bulldozer Fire Pump to provide the dependable high pressure required to produce effective fog.

Write today for an illustrated catalog of the complete line of Myers Bulldozer Fire Pumps.

Myers

Myers PUMPS
WATER SYSTEMS AND WATER SOFTENERS

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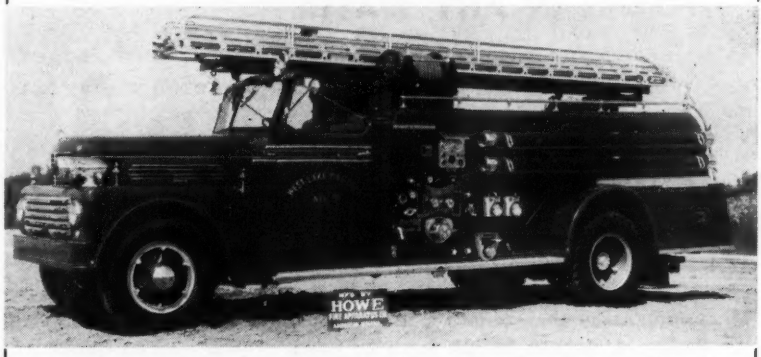
another
MEMCO AERIAL LADDER

The 50 foot Memco Aerial Ladder, shown in the picture below, was incorporated into a "Defender" pumper for the Westlake Fire Department, Erie, Pennsylvania, by the Howe Fire Apparatus Company, Anderson, Indiana.



Since other 50 & 65 foot Memco Aerial Ladders have been used by the Howe Company in apparatus destined for "far away places"—Haiti and Saudi Arabia—their confidence in Memco would seem to be complete.

for details write

MEMCO AERIAL LADDER COMPANY
1007 N. W. 36th Street
Oklahoma City 18, Oklahoma

Perth Amboy "Isotope Fire" Starts Chain-Reaction

On April 15, 1956, Perth Amboy, N. J., firemen under Chief Joseph Breyta answered an alarm of fire from a linoleum plant which turned out to be a good "worker" in this heavily industrialized area. Three engine and two ladder companies responded to control the fire. One Woodbridge, N. J., engine and the local Shell Oil Co.'s foam unit answered a standby call but neither was used.

The stubborn fire resulted when asphalt heating vats overflowed and spread the flaming material through the plant. After four hours of hard fighting the blaze was declared out; the damage amounted to approximately $150,000. One fireman was treated for smoke inhalation and another was given first aid for an abrasion to his knee. One pumper received $2,500 damage and several lengths of hose were destroyed during the action by the molten asphalt. To all appearances, the report of Chief Breyta on this fire closed another chapter in the department's operational routine—but it was willed otherwise.

Two days later the chief received a telephone call from a commercial laboratory in Boston, Mass., that specializes in industrial uses of radioactive materials. The call informed Chief Breyta that radioactive isotopes had been in use in the linoleum plant. Later the same day, two representatives of the laboratory checked the surprised chief and all men engaged at the fire, for evidence of radiation. These specialists then visited the plant where the source, a pellet of "Strontium 90," was located by means of a geiger counter. This pellet was retrieved from a mass of solidified asphalt. It had been used in a special thickness gauge to control the uniformity of floor covering materials.

This was the first knowledge the Perth Amboy Fire Department had received about possible use of isotopes in its community. Naturally somewhat disturbed and seeking more knowledge on the subject, Chief Breyta got in touch with the State Department of Health and at the same time notified the New Jersey Fire Chiefs Association of his action. The chain reaction was no longer confined to atomic energy.

As a result of the fire, the New Jersey Bureau of Adult and Occupational Health under Dr. Miriam Sachs, has begun notifying fire chiefs throughout the state of the location of the radioactive sources in their respective districts. Over 150 such locations have been listed to date. In addition, plans have been made for a one day state school, in cooperation with Rutgers University, for New Jersey fire chiefs or their representatives.

It is expected to hold the school in September. The course will cover the nature of radioactivity, its effect on humans, methods of measurement, detection, and protection, and applications pertaining to fire fighting in installations using radioisotopes. Dr. Sachs and Dr. Frank Dunnington of the University's Department of Physics, will conduct the course assisted by Mr. Richard J. Sullivan and Mr. Byron E. Keene of the State Bureau.

It is hoped that the one-day school will help the fire service to better prepare for fires of this nature and at the same time set at rest some of the needless fears concerning radioactive materials presently existing in the minds of some firemen.

Forestry Services Test Helicopters

The "Helitack Program" for testing the effectiveness of helicopters in fighting forest fires was begun during June in the San Bernardino, Cal., area. Carried on in the mountains near City Creek and Waterman Canyon, the tests included hose laying over slopes too steep for effective work by fire fighters on foot, "helitanks" or units for transporting water to forward areas and bulk drop tanks for releasing free-falling suppressant from the helicopter.

Working in cooperation on the tests were the U. S. Forest Service, the California Division of Forestry and the Arcadia Development Center. It is hoped that the tests will develop new and possibly revolutionary techniques for fighting inaccessible forest fires.

—Thanks Len Silvern

NEW, IMPROVED

UNOX® PENETRANT

Unox, the miracle penetrant that converts ordinary water into wetter water, has been further improved to make it even more effective in extinguishing Class A and Class B Fires.

COMPATIBLE WITH *ANY* WATER.

Improved Unox mixes with any water—hard, soft, brackish or seawater.

FOAMS IN ANY WATER.

Improved Unox readily converts to foam when mixed with air. It smothers, penetrates, cools, and extinguishes both Class A and Class B fires.

CONCENTRATE WON'T FREEZE.

Improved Unox withstands temperatures as low as minus 20° F. without freezing.

Approved by Underwriters' Laboratories, there is only one Unox Penetrant. Be sure to ask for it by name at your nearest Unox dealer or write direct.

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Our Readers Write Us

FIRE ENGINEERING for British Counterpart?

To the Editor:

As a member of the British Fire Service, I am taking the liberty of writing to you in the hope that you may be in a position to help me out of a slight difficulty.

I am very anxious to obtain copies of your magazine, but due to currency restrictions, I am unable to take up a direct subscription with the publishers.

I wondered, under these circumstances, if there is a subscriber who would be willing to send me his used copies, while I should be pleased to send him each month a copy of one of our journals.

Yours sincerely,

G. H. Pamplin
56, Crosby Road
West Brighton
Nottingham, England

Help Needed

To the Editor:

The Ohio State Firemen's Association in its constant effort to improve the fire service in equipment, personnel, working conditions, benefits and methods of fire prevention, is now attempting to set up some type of pension plan, benefit plan or relief plan for the volunteer fire service of the State of Ohio.

I need not explain to you or the fire service the tremendous job the volunteers are doing with little or no benefits other than their personal satisfaction of doing something for their neighbors.

We realize the tremendous job we have ahead of us in this venture. We would like to have any fire department which may have such a plan set up, drop us a set of their laws and by-laws, or rules and regulations, or anything they may have which will help us in setting up a worth-while pension type of plan for the volunteer firemen of Ohio.

Sincerely yours,

Roy E. Ricker
Chairman of Research
26 Kimberly Avenue
Youngstown 9, Ohio

Jamestown to Hold Month-Long Fire Prevention Program

To the Editor:

The Jamestown Fire Department will hold a month long Fire Prevention program starting September 14th with the crowning of Miss Fire Prevention. On the 15th of September we are holding a huge parade, and incidentally, we wish to ask all of your readers to participate in this parade for a prize list of over $1,400. For information write to Captain M. Hagstrom, Parade Secretary, Fire Station No. 2, Jamestown, N. Y.

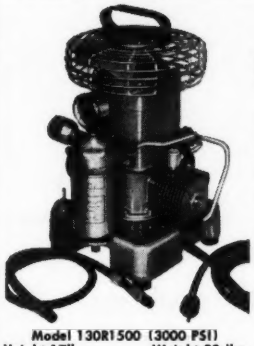
During the month we will hold clinics

Continued on page 707

...in heaviest smoke and toxic gases...

BREATHE FRESH, PURE AIR!

Your best personal protection in atmospheres filled with deadly gases is fresh pure compressed air.



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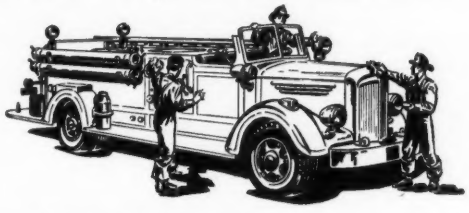
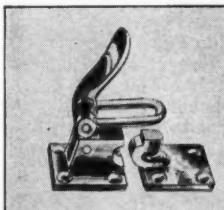
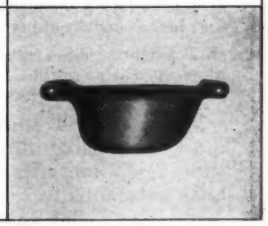
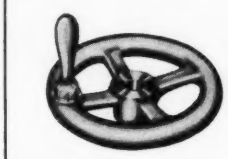
WHY DO MOST FIRE EQUIPMENT MANUFACTURERS-









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Grand Rapids 4, Michigan

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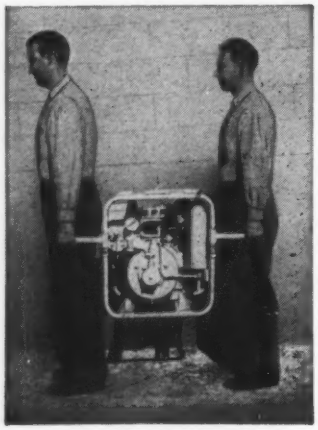
For Fittings Made to Their Specifications?

The reason is — knowhow. Our modern and complete facilities enable us to start from manufacturers' blueprints and develop special fittings all the way to the final brilliant finish. Manufacturers know, too, ATTWOOD quality is rigidly controlled, while ATTWOOD'S dependability has been proven countless times in actual service. Check with us on your special requirements.

HALE Type FZZ

Portable Fire Pumping Unit with NEW—

- **Ball-Type Valve**
- **Improved Priming**



Above—Frame-mounted FZZ can be easily carried by two men. It is also available mounted on rubber cushioned steel channels or on two truck-type wheels.

Fire Companies frequently write us telling of the many practical ways they use their portable Hale type FZZ, such as the following:

- **For fighting field or forest fires from moving trucks.**
- **For "wetting down" and standby use, thus releasing major equipment.**
- **For pumping out flooded cellars and elevator shafts after fire, flood or other emergency.**
- **For relaying water to pump or booster tank from sources inaccessible to major Fire Pumpers.**
- **For factory protection in fighting fires before major equipment arrives.**
- **For fighting oil or other type fires requiring foam. (Built-in foam proportioner available when specified.)**

The FZZ will supply from draft, 2 capable fire streams thru 1½" lines. Its performance substantially exceeds the NBFU and NFPA capacity and pressure requirements for portable pumping units.

Note: Discharge Adapter can be supplied for use with 2½" fire hose.

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Ask for Demonstration.
No Obligation.

HALE FIRE PUMP COMPANY

CONSHOHOCKEN - - - - PENNA.
Fire Pumps in All Standard Capacities

short cuts and gadgets

Automobile Gas Tank Reminder

During warm weather gasoline frequently expands and overflows from the tanks of parked cars, especially in hilly areas. The Jamestown, N. Y., Fire Department has equipped a small truck to be operated by one man for answering calls to flush away the spilled fuel. Normally the owner of the car involved is not around at the time of the clean-up so the fireman who responds leaves a unique "ticket" to call the motorist's attention to this simple safety step.

The "ticket" reads as follows:

The Jamestown Fire Dept. was called to flush gasoline which was running out of your tank. During warm weather it is advisable as well as economical to keep your gas supply below the full mark due to expansion from heat. May we have your cooperation? Thank you. Jamestown Fire Department, Charles R. Dorman, Chief.

Thanks Asst. Chief Jack Martyn

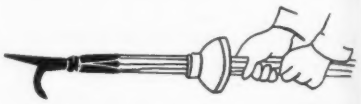
Snow Plow Doubles as Fire Fighter

One of the neatest "tricks of the trade" recorded comes to us via the Association of American Railroads, which says that up near Government Camp, Ore., a rotary snow plow was pressed into service for fighting a hotel fire at the Camp resort on Mt. Hood, where snow remains all summer.

The hotel burned down but a stream of snow played by the road-clearing rig helped keep flames from spreading to exposures.

Simple Hand Guard

Many fire fighters have been cut by glass or metal sliding down the plaster hook or pike pole, while engaged in forcible entry or overhauling operations.



To guard against this, a number of fire departments place a rubber guard, or washer or plunger, around the shaft of the hook just above the location of the hands.

The simple sketch depicts one such application.

Hues Tell Whose Hose Is Whose

Using color to identify fire department and fire company fittings and appliances isn't new, and this column has described several such innovations.

Now comes news from "Anonymous" that fire fighters of Richmond, Va., have painted their department's hose couplings with 21 different colors, each to indicate a different company and facilitate hose sorting after multiple alarm operations.

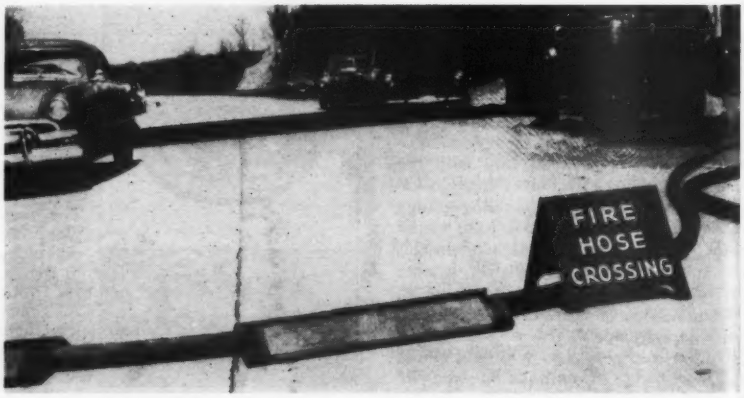
In Richmond, under the new system, the butts of hose sections, which used to be all red, may now turn up in such beauteous hues as aqua, daffodil yellow, ocean coral and French green.

The idea's good—but we pity the big department with 50 companies or more—and all color-blind blazebeaters.

Hose Bridge Builds Public Relations

The Butler, Md., Fire Department reports that their type of hose "jumper" not only protects the hose line but it also builds good public relations.

The unit is made by sawing a 4 x 6 to make two wedge shaped pieces. The sign is constructed of two pieces of hinged pressed wood that can be instantly set up. Both the bridge and the sign are marked with Scotchlite for easy identification at night.—***From University of Maryland Fire Service Bulletin***



Aerial Ladder Intercom

The Enid, Okla., Fire Department has equipped an aerial ladder with an electronic intercommunication system. Linking the tip of the fly and the turntable, it enables a fireman directing a ladder pipe to give instructions to the turntable operator.

Chief A. W. Lang using Enid aerial intercom. The unit is conveniently located near the ladder controls and requires the turntable operator to press a switch to talk to the flyman

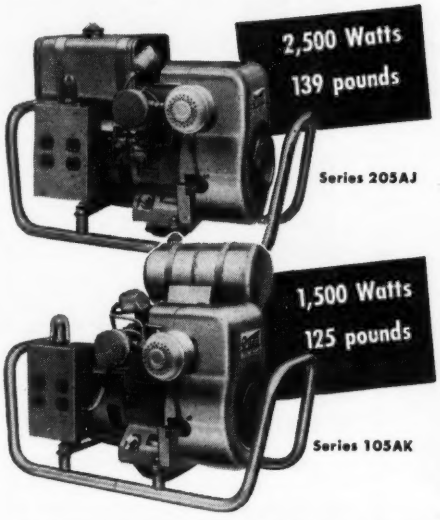
Chief A. W. Lang states that the idea overcomes the difficulty of hand and arm signals in heavy smoke and during darkness. In addition, it allows the man on the tip to give directions to the pumper supplying the nozzle. This is done through the turntable operator who relays the message, using the radio unit of the ladder truck.

The remote unit once snapped in place need not be touched by the user. Both hands are free for other tasks and the fireman on the ladder can give directions while working

Adapted from a commercial product, the remote unit control box is equipped with spring clamps so that it may be snapped on the ladder in any convenient location. The turntable unit is permanently mounted on the bed ladder near the control pedestal. The associated amplifying equipment is located in a box on the truck running board. A converter supplies the 110 volt A.C. required from the truck's 12 volt system.

The remote unit is wired to operate as a speaker or microphone and the nozzleman need not touch it for operation. The turntable unit requires pressing a switch before talking to the man on the ladder. Tests of the system have proven its value to the Enid Department.

YOU GET *4-cycle* DEPENDABILITY AND *Light weight* TOO . . . IN AN



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Other models to 50,000 watts.

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YOUR EFFICIENCY!
The accelerated tempo of modern times demands modern techniques plus stepped-up efficiency. Fire departments everywhere find the Super Vacuum Smoke Ejector provides the extra margin of efficiency necessary in modern day fire fighting. New and revolutionary in design, Super Vacuum will outperform other fans twice its size... gives the positive, controlled ventilation essential to the prompt, efficient control of fires.
CONTROL VENTILATION
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The heart of the SUPER VACUUM Smoke Ejector is the patented propeller. Conventional fans produce a chopping, recirculating action. In contrast, the SUPER VACUUM propeller is a perfect spiral air screw which creates a vacuum...suction is created over the entire face of the propeller and the air or smoke is discharged in a high velocity spiral. There are no dead spots.
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WRITE FOR ADDITIONAL INFORMATION OR CONTACT YOUR LOCAL FIRE EQUIPMENT DEALER
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- Seagrave Built 100% Hydraulic Hoist
- Seagrave Built Positive Ladder Locks
- Seagrave Built Electric Throttle Control for Ladder
- Seagrave Built One-Man Control
- Seagrave Built Ground Jacks

THE SEAGRAVE CORPORATION
Columbus, Ohio

Mechanical foam blanket covering 2,100 gallons of gasoline on Westbury, L. I., streets. Firemen used over 540 gallons of foam liquid to blanket the 250 by 75-foot pool created when transport struck a street sign tearing open a compartment of the 7,000-gallon tanker

Firemen Meet Westbury Gasoline Spill Emergency

A gasoline transport carrying 7,000 gallons of gasoline struck a "No Parking" sign while attempting to turn a congested corner in the Village of Westbury, L. I., on June 11, 1956. The sign tore a gash in a 2,900-gallon compartment of the truck, spilling most of the contents on the streets of the business district.

The gasoline cascaded down Fulton Avenue for two blocks and into Winthrop Street, creating a small lake in about the center of the village, precipitating an explosion and fire hazard which threatened the busy community for over six hours and posing serious problems for local and outside fire fighters and other emergency services, hurriedly mobilized to meet the threat of disaster.

Westbury firemen, who responded to an alarm sent in after the truck driver had shouted warnings to persons converging on the scene to put out their cigarettes and call fire and police, wasted no time getting into action. Directed by First Deputy Chief Anthony Martiello, they deployed to provide best possible protection of exposures in the event the fumes ignited. The Nassau County Highway Department which was alerted by radio, trucked in sand which the volunteers used to construct dams to confine the dangerous liquid.

Chief Martiello, appreciating the need for larger quantities of foam than were available locally, summoned Mitchel Air Force Base firemen, who responded under Chief Milton Fisher with an O-11A crash truck. These reinforcements used some 540 gallons of foam liquid to blanket the pool of gasoline estimated to cover an area 250 by 75 feet.

Fire hose was stretched from the tanker to a gas station 300 feet away and 800 gallons of the fuel remaining in the torn compartments of the transport were emptied into the filling station's underground storage tanks.

Police, using public address systems, patrolled the area to warn inhabitants and passing motorists away from the danger. A three-block section was roped off and efforts made to remove from it all possibilities of ignition. Public radio announcements also were broadcast to acquaint the public with the hazard.

Not wanting to draw off the gasoline into the sewer system, firemen constructed sand dikes leading to a nearby storm water sewer which flows directly into South Bay. This prevented diversion into the village sewer system and posed no additional hazards to business and residential buildings.

When all diversionary steps were completed, firemen opened fire hydrants over an area of 1½ miles in the vicinity of Fulton and Winthrop and flushed the gasoline away. Men were stationed along the runoff stream at various points to guard against fire as the material flowed toward the ocean. The only casualties during the operation were a few trout reportedly inhabiting the waterway.

Nassau County Fire Marshal George Clough commended Chief Joseph Wylie of Westbury, and his volunteer department on the manner in which they met the emergency. The Mitchel Air Force Base Fire Department, together with the Highway Department and cooperating police forces, also were praised for their part in the mutual effort.

The editors acknowledge the assistance of the Nassau County Fire Marshal's Office, Mitchel Air Force Base, and the Westbury, L. I., Fire Department, for the information concerning this unusual incident.

Monroe County Chiefs Briefed On "Jets"

Eighty-five chiefs and line officers from over thirty Monroe County, N. Y., fire departments traveled by chartered buses to the Niagara Falls Air Force Base recently for briefing and demonstrations on the subject of jet aircraft crashes. Host Chief Frank Lyons of the Base Fire Department and his staff afforded

a full day of crash procedures and equipment instruction to the group.

An unscheduled emergency landing by a jet fighter provided the fire officers with an unexpected actual demonstration of the efficiency of the Base Department. All present were amazed by the speed and orderly precision with which crash trucks, ambulances, pumpers and Air Police cars responded to line the runway and escort the disabled plane to a safe stop. *—Thanks Mac Hunter*

Big Business

The operating budget for the New York Fire Department for the fiscal year 1956-57 has been set at $88,750,905.00.

This is broken down as follows:

Executive management	$ 297,675.00
Departmental services	20,086,560.00
Extinguishment and prevention	65,860,025.00
Communications	2,026,620.00
Fire investigation	280,025.00
Miscellaneous	200,000.00

Salaries of personnel of the department, under the new schedule, are:

1	Chief of Department	$15,100.00
5	Assistant Chiefs	11,600.00
9	Deputy Chiefs	10,850.00
64	Division Chiefs	9,750.00
235	Battalion Chiefs	$8,445.00-9,250.00
376	Captains	7,375.00-8,205.00
1359	Lieutenants	6,460.00-6,985.00
96	Engineers	6,100.00-6,300.00
39	Pilots	6,300.00-6,500.00
9906	Firemen	4.000.00-5,315.00
1	Chief Medical Officer	8,600.00
11	Medical Officers	7,730.00
5	Chaplains	3,625.00
12,107		

The following projects are included in the above; a number of these are already under way:

3 new fireboats	$2,475,000.00
Conversion of F/S Harvey from gasoline to diesel electric	393,000.00
Apparatus	500,000.00
Communications, construction	800,015.00
New Central Office, Borough of Richmond	410,040.00
12 fire stations	
Engine 299-Ladder 152	330,000.00
Engine 246-Ladder 169	345,700.00
Engine 202-Ladder 101	320,000.00
Engine 11-Ladder 11	328,000.00
Engine 8-Ladder 2	472,000.00
Engine 76-Ladder 22	645,000.00
Engine 214-Ladder 111	300,000.00
Engine 59-Ladder 30	335,000.00
Engines 228, 44-Ladder 13	570,000.00
Engine 275	321,000.00
Engine 58-Ladder 26	343,000.00
Engine 165-Ladder 85	318,000.00

Smoking in Bed Brings 45 Day Jail Term

Hugh Snapp, 62-year-old stock clerk, was sentenced to 45 days in jail, March 5, after he pleaded guilty to smoking in bed and causing hotel mattress fires twice within 45 days. The violation fell under the Santa Monica, Calif., careless smoking section of the health and safety code.

Assistant Fire Chief William McDade said Snapp was warned against smoking in bed, following a mattress fire in his hotel room last January 15. He was arrested March 3 after a second mattress fire in his room. *Paul C. Ditzel*

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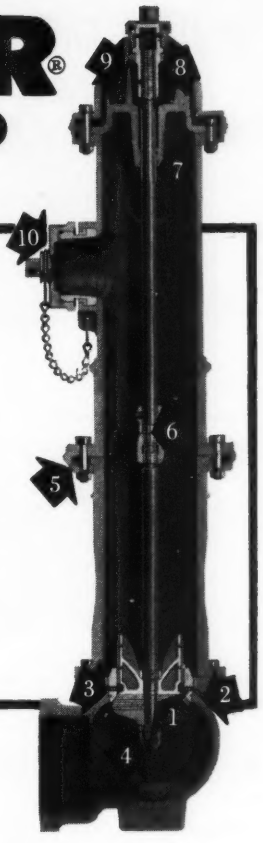
AWWA IMPROVED FIRE HYDRANTS



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Mueller Hydrants use compression type main valves (1) that close with water pressure, permit repairs without water shut-off. Double drain valves (2) are part of the main valve and are force-flushed when hydrant is operated. Seat ring (3) and cap nut (4) are non-corrosive bronze. Flange (5) and stem coupling (6) break on impact, eliminating barrel and stem damage. "O"-ring seals (7) around stem are water-tight. Oil reservoir (8) lubricates threads and bearing surfaces. Dry top design (9) keeps water from operating surfaces. Nozzles (10) are breech-locked and calked to stop blowouts. *Mueller Hydrants are* always *ready—for fire emergency. Write for information or contact your Mueller Representative.*

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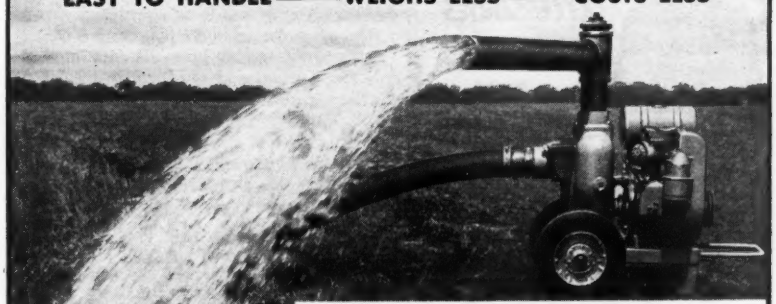
OVER 100 GPH FOR EACH POUND OF PUMP
YET THIS *FLOMAX-15* IS MADE OF TOUGH IRON FOR LONG LIFE

EASY TO HANDLE——WEIGHS LESS——COSTS LESS



FLOMAX **Super Hard Seals provide longer trouble-free pump life without nuisance of filling grease cups or fear of dirty grease.**

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FLOMAX pumps are	***FLOMAX*** pumps have
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Non-Clogging	Removable Inlet and Outlet Flanges
Quick Priming	Higher Capacities and Higher Heads

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McINTIRE GATE VALVES

Fig. 164AN

4½" swivel female x two 2½" male Gated Siamese. Quick opening, ¼ turn valves.

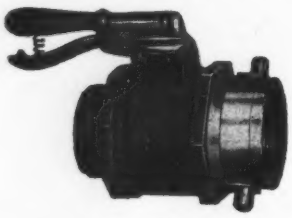

Fig. 163

Made either Right Hand or Left Hand 2½" male x female, gate valve.

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the round table

discussion of current fire department and fire management problems

Calling Off-Duty Firemen

THIS IS THE THIRD installment of the Round Table on calling off-duty firemen.

The generous response from our readers makes it necessary to carry the discussion over to this issue and to the September issue as well. The editors will welcome any additional comments on the subject. Address replies to Round Table Editor, FIRE ENGINEERING, 305 East 45th Street, New York 17, N. Y.

Discussion of the Subject

Ray Harry, Chief, St. Cloud, Minn.: Our off-duty men are reached by telephone and large siren system.

Only 50 per cent of off-duty men are permitted to leave the city at one time. Almost 100 per cent of the men who are in the city at the time of a large fire respond.

I believe that at the time a man is hired, he should be told that he must return to duty in the event of a large fire.

Off-duty men receive additional compensation for such emergency service.

A. J. Bargagni, Chief, Bethesda, Md.: The Bethesda Fire Department is a fully paid fire department employing 25 men. The two-platoon system is used, with a call-back system as follows: When the company responds to an alarm of fire, two men from the off-duty platoon are called back to the engine house. A rotating call board is used, and after a man has been called in, his name is placed at the bottom and again progresses to the top.

This method has been as successful as could be hoped for with the present personnel problems. A limited amount of outside work is permitted which makes some off-duty men not available for call-backs.

The off-duty men who are called back are paid $2.00 for each time they return to company quarters regardless of the length of time they stay. All call-back men stay until the apparatus has returned to quarters.

Two 500-gallon pumpers are maintained as reserve apparatus, and are available to respond in this capacity.

A. McC. Marsh, Chief, Columbia, S. C.: Off-duty firemen are called back by telephone. It is a policy and practice of ours that every fireman must have telephone service in the house in which he resides. The city rebates one-third of the annual service charge to each man who has one listed in his name.

This method has been most successful, a percentage of 95 to 98 per cent responding. The difference accounts for those who could not be reached.

We also have the cooperation of radio and TV stations in calling the men back.

Off-duty men receive time and one-half compensation for such calls.

We maintain reserve apparatus at the headquarters station.

J. P. Newark, Chief, Grand Forks, N. D.: Each morning we print up a number of copies of the roster of each shift. One of these is given to the telephone watch and one to the police department. The names of firemen who are on an off-day schedule are also entered on this list. In case of a large fire, the operator is instructed to call the off-shift. In case an extreme emergency exists, the police department will also call a certain portion of the list.

We can generally expect about 75 per cent of the off-duty men to respond. At a fire of three or four hours duration we can expect around 90 per cent response.

Our men have been responding to every call, unless they are out of the city or on sick leave.

There is no provision for compensating them unless they are called back on a legal holiday.

We keep enough reserve apparatus in the department for the entire off-shift.

T. L. Townley, Jr., Chief, Norman, Okla.: Off-duty firemen are recalled to duty by telephone.

This method has been very successful. We have two stations with 11 men on duty and 14 men off duty. On any building fire, five off-duty men are called. If another alarm is turned in, all are called. We will then have nearly all members at hand.

To increase the response of off-duty men, I believe in teaching firemen the responsibilities of their position and compensating them with adequate salaries.

We do not pay off-duty men for such emergency service.

Reserve apparatus is maintained to be manned by off-duty men who respond.

Ray Jordan, Chief, Muskogee, Okla.: We have our operators call the captains that are off duty, and they in turn, call the members of their companies. The assistant chiefs, fire alarm superintendent, and chief mechanic are also called if off duty.

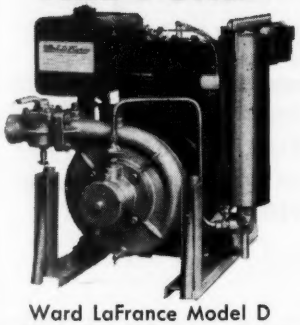
This method has been very successful. We get practically 100 per cent response.

Our off-duty men do not receive additional compensation for emergency service.

We have reserve equipment at each station that the off-duty men pick up and bring to the fire. Each company knows

Portable . . . light weight

FIRE PUMP



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- Husky 8 ¼ H.P. Briggs & Stratton engine.
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what they are expected to do. I would say it takes about 20 minutes at the most to get all our men to respond to a general alarm.

Gayle V. Coger, Chief, Fresno, Cal.: Section 1, Article XI, from our Procedure Manual provides the following with regard to the calling of off-duty men:

"The off-duty members will be divided into companies corresponding to the position they hold while on duty on each platoon for the purpose of recall to duty in case of emergency. Information on recall cards will consist of the member's name and telephone number through which he can ordinarily be contacted while off duty. Commanding Officers shall be guided in the maintenance of information on recall cards by instructions received from Bureau of Fire Alarm only. The Captain of the Bureau of Fire Alarm shall maintain a master call list consisting of all recall units and shall check with station Commanding Officers for the purpose of conformity. A set of cards for each platoon will be maintained in each fire station and the Bureau of Fire Alarm.

"Bureau of Fire Alarm will call the Officers in charge of apparatus in stations and designate what units to call. In the event all apparatus is out of service, Bureau of Fire Alarm will then make the recall.

"Members shall be held personally responsible to be in a position to report for duty, when called, within a reasonable time, and shall report to the Officer in Charge of fire or emergency, and remain on duty until dismissed by the Officer in Charge.

"Members on vacations, sick leave or suspension will not be required to respond."

We have had as many as 84 per cent of our off-duty firemen respond within the first hour.

I would suggest in addition to our method of recall that pre-arrangements be made with both radio and TV stations to broadcast immediately for firemen to return to their respective stations.

Men are given compensating time off for this emergency service.

We do maintain reserve apparatus in our department.

Paul A. Neumann, Chief, Appleton, Wis.: Off-duty firemen are recalled by telephone.

Our response has been very good, for we often have 100 per cent turn out.

Our men are paid time and one-half figured on an hourly base for responding on their time off.

We do maintain reserve apparatus.

Lynn P. Martin, Chief, Decatur, Ill.: The chief notifies the dispatcher that off-duty firemen are needed. The dispatcher then calls the men by phone.

This method has been very successful. The last two fires at which more help was needed, resulted in 98 per cent of the off-duty men answering one alarm and 99 per cent the other.

Our men do not receive additional compensation for such emergency service.

We do not have all stations in service,

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MARLBORO, MASSACHUSETTS

but do use the apparatus formerly used in them when it is needed. We do not have any reserve apparatus.

John W. Gallagher, Chief, Huntington, W. Va.: Off-duty men are called by telephone, radio and television. This method has been very successful, as we get all the men out who have been contacted, or about 75 per cent of those off duty.

I believe we can increase such response by keeping all department members informed of the serious effect that the shortage of manpower would have, and by keeping an up-to-date record of each man's telephone number in fire alarm headquarters.

Off-duty men do not receive additional compensation for responding to such emergencies.

We maintain reserve apparatus, but with large fires, manpower is our greatest need.

C. W. Espey, Chief, Johnstown, Pa.: All off-duty firemen are subject to call in the event of a large fire. The operators have a list of all men and their telephone numbers and upon notification by chief or assistants, call them by telephone.

Our method so far has proved successful, for we are able to get from 50 to 75 per cent of the men back.

I believe that additional time-off should be given the men to compensate them for emergency service. Our men do not receive additional compensation.

We have reserve apparatus that could be manned by off-duty men. We also have a mutual aid agreement with surrounding boroughs whereby they respond with their men and apparatus and fill in at our various stations. They also respond on call if their services are needed at large fires. We, in turn, always respond to aid them.

Sidney F. Morse, Chief, Billings, Mont.: All firemen in Billings are required to have telephones. In the event of large fires, the dispatcher on duty calls one other dispatcher to assist in recalling the off-duty members. All men are called except those on sick leave and those who have checked out of the city on vacation, etc.

Response has been prompt and from 90 to 95 per cent of off-duty personnel report for duty.

No compensation is provided, but the men reporting on their days-off are given additional time off.

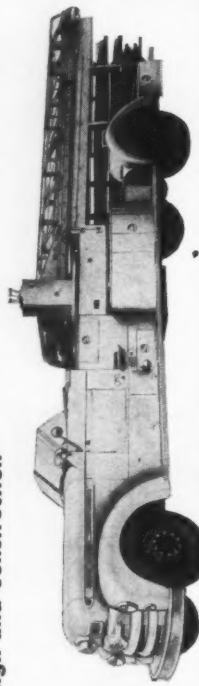
The first arrivals of off-duty men at the stations for turnouts, etc., bring any reserve apparatus called for.

Max Woods, Chief, Columbia, Mo.: We have a two-way system of calling back off-duty firemen in the event that we may need additional help: First by telephone and secondly by the cooperation of local radio stations.

The response of off-duty firemen has been very successful.

Off-duty men receive additional time off to compensate for their emergency service.

Off-duty firemen man reserve apparatus.



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- Seagrave Built Positive Ladder Locks
- Seagrave Built Automatic Throttle Control for Aerial Ladder
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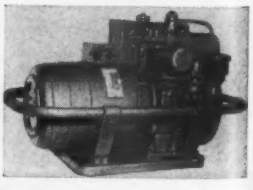

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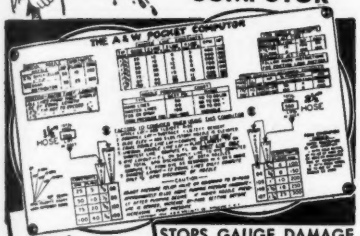

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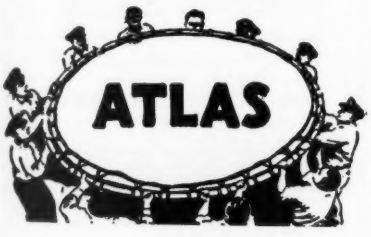

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OUR READERS WRITE US

Continued from page 699

in our retail stores, schools for industrial plant watchmen, demonstrations for home owners in each city ward, inspection tours in nursing homes and hospitals, talks in all schools, demonstrations of fire fighting equipment for service clubs and fire extinguisher demonstrations.

Notice of our program in your magazine will assist us and it may induce other cities to take up Fire Prevention to a greater degree.

Sincerely,
Clayton R. Webeck
Jamestown Fire Dept.

Likes the "Oddities"—Offers

To the Editor:

We have been taking your magazine for several years and have enjoyed it very much. Among some of the things we enjoy are the "oddities." We have one here that we would like to pass along to you.

Not many towns have a fire chief who is also the mayor. From January 1, 1952 until June 9, 1954, W. F. Baker was fire chief of Earle and Mayor of Norvell, Ark.

This came about by virtue of his (the mayor) living in Earle when he was elected chief and his moving to Norvell soon after. I might add that Norvell is about 373 in pop. and joins Earle, pop. 3375 on the latter's west city limits.

P. S. I also live in Norvell as do our two captains and one other member of the Fire Department.

Jim Belue, Chief
Earle, Ark.

Praise for Editorial on Problems of Small Town Departments

To the Editor:

You will probably receive many letters about the editorial *Small Departments Face Big Problems* as the problem is so universal. However, you have covered the subject so as to almost exactly describe our situation that we wanted to write you for permission to reprint your editorial just as it is, without any changes, as part of our annual campaign to raise operating funds for the year which we started June, 1956. We receive no financial assistance from the county and depend solely on an annual drive (donations) to meet our budget.

We feel sure that you haven't been in Duval County, but the article could not have been more descriptive of our problem if you had spent a week with us and the other sixteen volunteer departments surrounding the City of Jacksonville.

About the only recognition we get is from the Jacksonville Fire Department, which we appreciate and for which we are very thankful, but we need to wake up the business people who have done just what you brought out in the fourth paragraph of your article.

Charles V. Doolittle, President
Arlington Volunteer Fire Dept.
Arlington, Fla.

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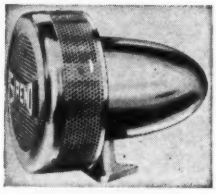

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ONLY $.55 Ft. cpld.

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Mechanical foam playpipes, Phomaire, complete with pickup tube (Worth $55.00). Our price only	15.00 ea.
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1938 Ward LaFrance, Sedan body.
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Send full information including lines in territories not traveled.

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1952 Ford F7 new factory rebuilt motor.
9.00 x 20 tires, mud grip rear, new.
1000 gal. tanker, 3/16" steel, 3 2½" gate valves.
150 G.P.M. Oberdorfer PTO pump.
1 reel with 150' 1" booster hose with nozzle.
Full width compartments front and rear.
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Painted and lettered.
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PLUS—all the advantages of superior durability and added beauty of the EXCLUSIVE NIELSEN-RIONDA solid flat back

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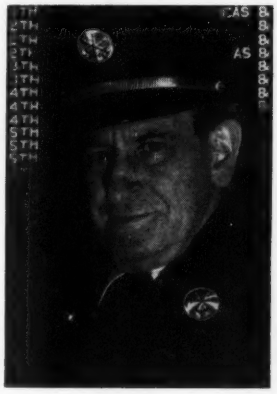
Write for free 32 page catalog illustrating badges available in the new STA-BRITE as well as standard finishes

NIELSEN • RIONDA INC.
40 JOHN ST., NEW YORK 38, N. Y.

Obituaries

John J. T. Waldron

John J. T. Waldron who recently retired as deputy fire chief of the New York Fire Department, died suddenly on July 26. He was buried with full fire department honors on July 30.



Chief Waldron was born January 11, 1884. He entered the New York Fire Department as a probationary fireman on June 19, 1907, giving up a clerkship in the general post office. He was made lieutenant June 4, 1913; captain in 1916; battalion chief in 1922 and deputy chief of department October 20, 1925.

Aside from the regular ratings, he served as assistant chief of staff and operations; chief in charge of the Fire College; lieutenant in charge of Public Assembly. He was the only man in the department ever to be promoted from lieutenant to acting deputy chief. It was in this capacity that he was placed in charge of the then newly formed Bureau of Fire Prevention.

Chief Waldron held membership in the International Association of Fire Chiefs and the Eastern Association of Fire Chiefs. He served the latter organization as its president for two terms, 1940-41 and 1941-42.

Chief Robert J. H. Lemon

Robert J. H. Lemon, for 41 years a member of Halstead Manor Hose Co. No. 4, Mamaroneck, N. Y., and Chief of the Mamaroneck Village Fire Department, died July 1, after a long illness.

Chief Lemon, affectionately known throughout Westchester County, N. Y., as "Bob," was one of the founders of the Fire Chiefs Emergency Plan of Westchester County and served as a vice president in its early days.

Bob Lemon joined Halstead Manor Hose in 1915, became captain in 1919-1920, and served as chief in 1928-1929.

Perhaps the proudest moment of his life came when his son, William Lemon, was named Chief of the Mamaroneck Village Fire Department and later went on to become president of the Fire Chiefs Emergency Plan.

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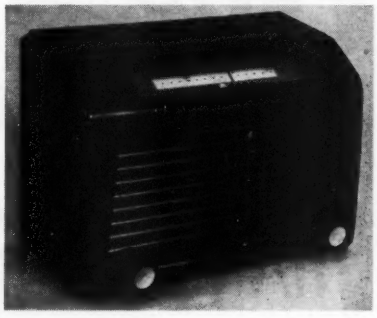
RADIO RECEIVER DESIGNED FOR YOU!



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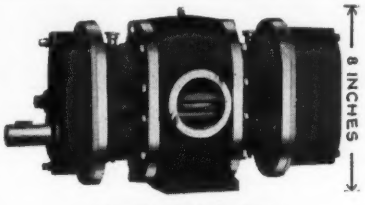

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AUGUST, 1956

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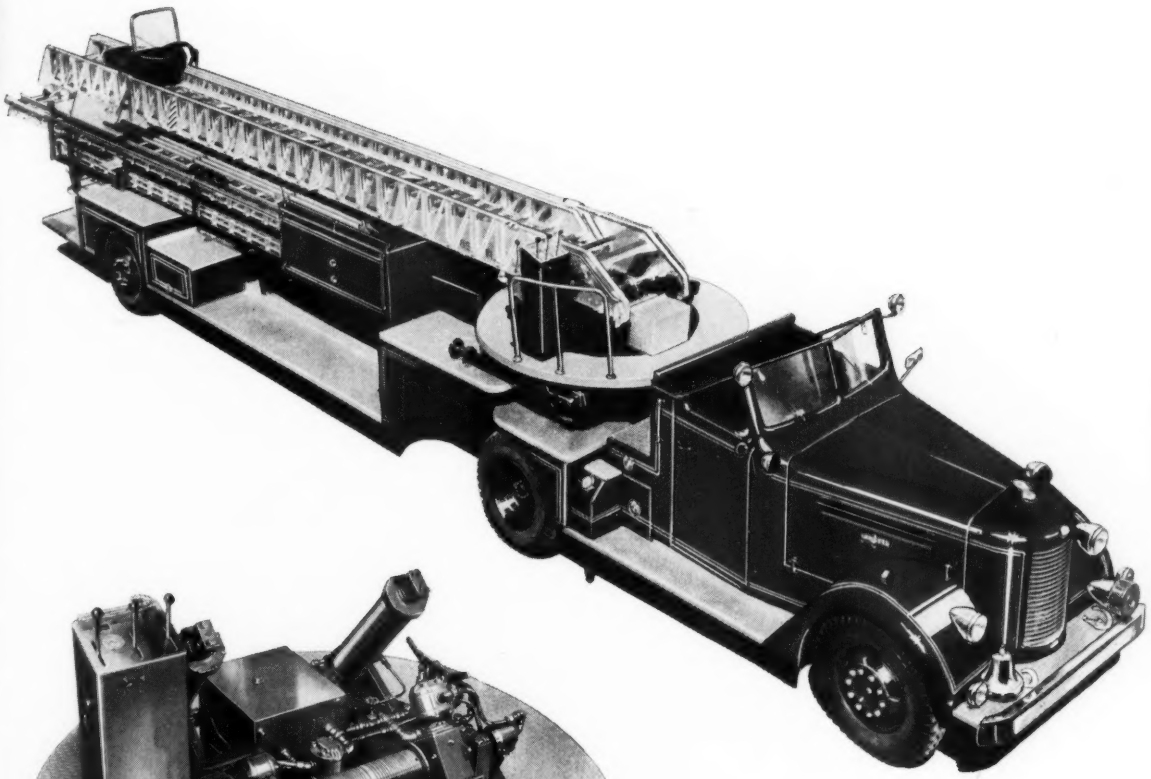

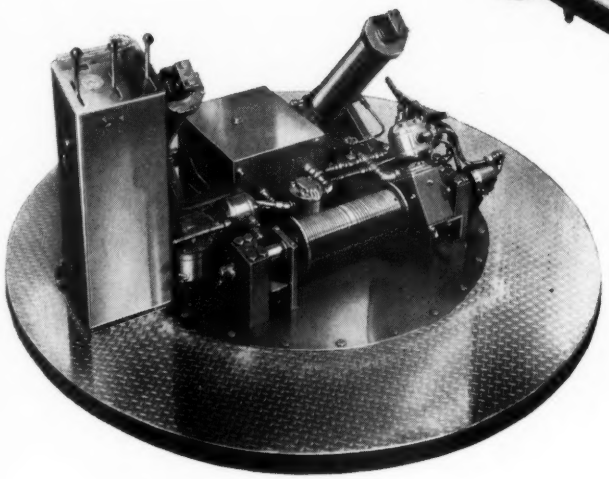

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